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(U-Th)/He and U-Pb double dating constraints on the interplay between thrust deformation and basin evolution

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Dedication

This dissertation is dedicated to my wife Yomayra Roman and son Cesar Gael whose sympathy, encouragement, support and personal sacrifices make this dissertation a reality. To my father Cesar E. Pujols and mother Vilma I. Vazquez, it is impossible to thank you adequately for everything you have done. I could not have asked for better parents or role-models. A special thank you to my advisor Daniel Stockli, for his constant support, encouragement and for believing in me. Finally, I dedicate this dissertation to those who have departed and time together I sacrificed in search of a better future.

"*Don't judge each day by the harvest you reap but by the seeds you plant.*" – Robert Louis Stevenson

(U-Th)/He and U-Pb double dating constraints on the interplay between thrust deformation and basin development

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Despite several decades of evolving concepts for thrust belt mechanics and foreland basin evolution, an in-depth understanding of key process linkages and dynamic connectivity between foreland basins and thrust belts remain elusive. In particular, temporal aspects of thrust deformation, detrital provenance, flexural basin subsidence, and stratigraphic architecture, remain debated. This study developed an unprecedented systematic U-Pb and (U-Th)/He (He) detrital zircon (DZ) double dating provenance record for the classic Sevier fold-thrust belt (SFTB) and foreland basin in north-central Utah, to elucidate the temporal linkage between thrust deformation, hinterland unroofing and foreland basin sedimentation through improved isotopic provenance analysis. The zircon (U-Th)/(He-Pb) data in the SFTB and foreland basin allowed constraining distinct episodes of cooling, indicative of major Cenomanian and Campanian thrusting and denudation in the SFTB. The temporal synchronicity between deformation, exhumation and coarse clastic strata indicates that rapid hinterland deformation triggers episodes of major coarse clastic sedimentation and dispersal beyond the proximal foreland basin margin. Moreover, DZHe depositional lag time and DZ U-Pb provenance analyses at the

one-myr chronostratigraphic resolution strongly suggest that discrepancies in stacking pattern, shoreline trajectory and progradation rates in the foreland basin can in fact be explained by distinct episodes of major hinterland exhumation.

This high-density DZ data set, additionally establish an unequivocal temporal link between major retroarc shortening and voluminous arc magmatism, challenging current conceptual Cordilleran orogenic models that invoke temporal delays between retroarc shortening and voluminous arc magma generation. Both arc magmatic fluxes and retroarc shortening episodes appear to be driven by plate boundary convergence rates. Hence, this study proposes a new model where rate increases in subduction and/or overriding plate motion control both retroarc contraction and arc-magma cyclicity. Other aspects of this investigation explore the influenced of tectonics on continental-scale drainage reorganization in western North America and Neuquén Basin, Argentina.

In summary, the integration of these zircon geo-thermochronometric data in the proper SFTB and foreland basin architectural context helped improve (1) conceptual models that relate temporal, thermal, and spatial aspects of thrust activity to sediment dispersal patterns and (2) shed light into the spatiotemporal feedbacks between upper-crustal deformation and convergent-margin magmatism in Cordilleran orogenic systems.

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Chapter One: Integrated Bedrock And Foreland Basin Detrital Zircon Analysis To Temporally And Spatially Constraint The Interplay Between Progressive Unroofing And Proximal Sedimentation In The Late Cretaceous Sevier Orogenic Belt

ABSTRACT

Detrital zircon (DZ) geo-thermochronometric data from Sevier fold-and-thrust belt (SFTB) bedrock and proximal syn-orogenic Canyon Range Conglomerate (CRC) and Indianola Group (IG) provide new constraints on the timing of hinterland deformation, unroofing history and the temporal relationship between major coarse clastic dispersion and thrusting in the SFTB and foreland basin. Zircon (U-Th)/He (ZHe) ages in both the Pavant and Nebo thrust sheets record significant Cenomanian cooling suggesting synchronous major exhumation and thrusting along a large segment of the frontal central and northern Utah portions of the SFTB. This is additionally supported by DZHe ages indistinguishable from depositional age in the Cenomanian Dakota Fm. and lower CRC requiring rapid exhumation and deposition. The wedgetop CRC chronicles two significant unroofing episodes. The first episode is marked by DZHe ages indicative of PVT Cenomanian cooling and a dominant ~125 Ma peak, likely derived from shallow crustal levels of the hanging wall pre-PVT cooling. The second episode preserves the progressive cooling and unroofing of the Canyon Range culmination with the potential contribution of upper Paleozoic sources from the Provo salient containing cooling ages older than Canyon Range and Pavant Precambrian-Cambrian thrust sheet strata. In the Indianola Group, the significant presence of Paleozoic DZHe ages and Paleozoic-

Mesozoic DZ U-Pb ages in the Cenomanian Sanpete and Turonian Allen Valley Fms. suggest derivation from adjacent exhuming Paleozoic to Jurassic strata from the easternmost frontal PVT and NT sheets. Subsequent to Cenomanian fast exhumation, the proximal foredeep strata record a significant provenance change characterized by predominant input from Precambrian-Paleozoic strata containing reset Mesozoic DZHe cooling ages and DZ U-Pb age populations dominated by Precambrian DZ U-Pb ages. The systematic change on all foredeep stratigraphic transects indicates wholesale drainage integration likely driven by major Cenomanian thrusting in the frontal SFTB. DZHe lag time ages in Campanian CRC and IG require derivation from rapidly exhumed SFTB sources coeval with major foreland basin architectural changes (e.g., Sixmile Canyon Fm. and Castlegate Fm.). The coarse clastic sediment dispersal in the Dakota Fm. is synchronous as well with major shortening in the PVT and NT of the SFTB agreeing with models suggesting active trusting in the hinterland controls major coarse sediment dispersal in a foreland basin.

Keywords: Sevier Fold-and-Thrust Belt, Sevier Foreland Basin, Detrital Zircon (U-Th)/(He-Pb) double dating

INTRODUCTION

The lack of temporal resolution and constraints on fold-and-thrust belts and proximal foreland basin syn-deposition has precluded a robust understanding of the key forces modulating basin margin deposition and sediment transport to distal fluvial and

marine environments. Current conceptual models on major sediment dispersal in foreland basins have attributed sediment dispersion and larger sediment influx to numerous controls such as thrusting, isostatic rebound post-thrusting, crustal-scale dynamic tilting, changes in flexural subsidence, sediment supply or climate [e.g., *Heller et al.*, 1988; *Heller and Paola*, 1989; *Yingling and Heller*, 1992; *Kamola and Huntoon*, 1995; *Houston et al.*, 2000; *Heller et al.*, 2003; *Horton et al.*, 2004; *Aschoff and Steel*, 2011a; *Aschoff and Steel*, 2011b; *Leeder*, 2011]. In light of the difficulties associated with distinguishing between the aforementioned controls and the lack of age resolution in fold-and-thrust belts and proximal syn-orogenic deposits no conclusive link between thrusting and major sediment dispersal to distal portions of the basins has been fully established.

The Cordilleran (Sevier) fold-and-thrust belt (SFTB) and its foreland basin in central and northern Utah are one of the best studied fold-and-thrust systems in the world. Numerous fundamental concepts relating the dynamic interplay between thrusting and foreland basin evolution have been developed and tested in the SFTB [*Fouch et al.*, 1983; *Lawton*, 1983; 1985; *DeCelles et al.*, 1995; *Kamola and Huntoon*, 1995; *Constenius*, 1996; *Mitra and Sussman*, 1997; *Constenius et al.*, 2003; *Horton et al.*, 2004; *DeCelles and Coogan*, 2006; *Lawton et al.*, 2007]. However, despite being one of the best studied thrust belt and foreland basin systems and an excellent test ground to relate sediment dispersion to thrust activity, the timing and magnitude of rapid tectonic exhumation along the Late Cretaceous deformational front and its association to sediment sourcing, dispersion and proximal depocenter connectivity remains only partially understood.

This research employs detrital zircon (U-Th)/(He-Pb) double dating on major Sevier frontal structures and on wedgetop and foredeep deposits along deformational strike to explore sediment provenance and enhance the chronological link between progressive hinterland deformation, unroofing and sediment dispersal among proximal syn-orogenic foreland depocenters. In contrast to conventional detrital studies, this study establishes both a zircon U-Pb and (U-Th)/He geo-thermochronological reference frame on Precambrian, Paleozoic and early Mesozoic strata in the Canyon Range thrust (CRT) and the Charleston-Nebo salient (CNS) to benchmark and correlate hinterland (U-Th)/(He-Pb) signatures to those observed in the syn-orogenic Late Cretaceous strata of the Canyon Range Conglomerates (CRC) and Indianola Group (IG). The detrital zircon double dating approach allows for further provenance distinctions and a more comprehensive unroofing reconstruction by including a portion of the hinterland thermal history (in part a function of the deformation history) on top of the North America DZ U-Pb age components. This is particularly useful when compositional provenance analysis is obscured by complex along strike deformational and unroofing histories such as those encountered in central and northern Utah SFTB segments [e.g., *Jefferson*, 1982; *Constenius et al.*, 2003; *Kwon and Mitra*, 2004a; *DeCelles and Coogan*, 2006; *Kwon and Mitra*, 2006]. The geo-thermochronometric results favor models that relate major clastic sediment dispersal during active thrusting in both the Cenomanian and Campanian [e.g., *Burbank et al.*, 1988; *Kamola and Huntoon*, 1995; *Horton et al.*, 2004].

GEOLOGIC SETTING AND PREVIOUS CONTRIBUTIONS

Sevier Fold-and-Thrust Belt; Structures, Timing and Displacement estimates

The middle to late Mesozoic SFTB is the easternmost and youngest expression of thin-skinned contractional deformation in the North America Cordilleran orogenic belt [*Armstrong*, 1968; *Burchfiel and Davis*, 1972; *Royse Jr et al.*, 1975; *Skipp*, 1987; *Schirmer*, 1988; *Yonkee*, 1992; *Mitra et al.*, 1994; *DeCelles et al.*, 1995; *Schmitt et al.*, 1995; *Mitra*, 1997; *DeCelles*, 2004]. The SFTB is widely believed to be the product of convergence during subduction of the oceanic Farallon plate beneath the North American plate resulting in magmatism and retro-arc contractional deformation along the inherited cratonic hinge line in the western United States [*Armstrong*, 1968; *DeCelles*, 2004]. The onset of Sevier deformation is still debated and may have started as early as the Late Jurassic-Early Cretaceous [*Armstrong*, 1968; *Presnell and Parry*, 1995; *Currie*, 1998b], yet it is well known that the major phase of SFTB shortening occurred from Early to early-Late Cretaceous [e.g., *Allmendinger and Jordan*, 1981; *Allmendinger et al.*, 1984; *Lawton*, 1985; *Mitra*, 1994; *Mitra et al.*, 1994; *DeCelles et al.*, 1995; *Lawton et al.*, 1997; *DeCelles*, 2004; *Kwon and Mitra*, 2004b; *Lawton et al.*, 2010; *Valora*, 2010]. The timing of faulting, styles and the stratigraphic intervals deformed in the SFTB are manifested differently along strike, in part due to pre-existing stratigraphic and structural weakness established during Paleozoic deformation [e.g., *Mitra*, 1994; *Constenius et al.*, 2003; *DeCelles*, 2004; *Kwon and Mitra*, 2004b; *DeCelles and Coogan*, 2006].

In north-central Utah, the Provo salient is one of the dominant Sevier contractional expressions and comprises from west to east; the Sheeprock, Tintic Valley, Midas thrusts, and the Charleston-Nebo salient (CNS) (Figure 1.1) [*Tooker*, 1983; *Constenius*, 1996; *Mitra*, 1997; *Mukul and Mitra*, 1998; *Constenius et al.*, 2003; *DeCelles*, 2004; *Guenthner et al.*, 2014]. The CNS places Precambrian basement over Paleozoic strata, carrying a thick section of Pennsylvanian-Permian marine clastics and carbonates of the Oquirrh Group [e.g., *Royse*, 1993; *DeCelles*, 2004; *Horton et al.*, 2004]. Constenius and others [1998 & 2003] described the temporal and structural relationships of the CNS and proposed two phases of deformation. The first phase of deformation represents the main translational phase of the CNS and is constrained to be ca. 100-80 Ma by the erosional truncation of the Charleston-Nebo thrusts by Campanian Indianola Group and Ar/Ar thermochronometric data in the footwall of the CNS [*Lawton*, 1985; *Bryant and Nichols*, 1988; *Mitra*, 1997; *Robinson and Slingerland*, 1998]. The second deformational phase has been constrained between 79-40 Ma and is characterized by internal imbrication and growth of the Santaquin culmination with little eastward translation [*Bryant and Nichols*, 1988; *Schwans*, 1995; *Haldar*, 1997; *Mitra*, 1997; *Robinson and Slingerland*, 1998; *Constenius*, 1999; *Constenius et al.*, 2003]. The Charleston and Nebo thrusts accommodated ~85 km of shortening in phase one and ~20 km in phase two [*Constenius et al.*, 2003].

The SFTB front in central Utah consists of the Canyon Range (CRT), Pavant (PVT), Paxton (PXT) and Gunnison (GT) thrusts. The Early Cretaceous CRT placed Neoproterozoic and Cambrian strata on Proterozoic to Devonian quartzite and carbonate

units in the Canyon Range [*Mitra et al.*, 1994; *DeCelles et al.*, 1995; e.g. *DeCelles and Coogan*, 2006]. Subsequent deformation and erosion during the Late Cretaceous associated with the PVT, PXT, and GT resulted in the deposition of the Canyon Range Conglomerates (CRC), which include deformed proximal alluvial fan, marine and fluvial facies [*Christiansen*, 1952; *DeCelles and Coogan*, 2006; *Lawton et al.*, 2007]. The motion along the CRT pre-dates the upper Albian (?) to Cenomanian Cow Canyon Member conglomerate, which unconformably overlies the CRT trace [*DeCelles and Coogan*, 2006; *Lawton et al.*, 2007]. CRT displacement estimates range from ~40-70 km [*Sharp*, 1984; *Royse Jr*, 1993] to 116 km [*Currie*, 2002] to >150 km [*Bartley*, 1984] to more recently, >100 km and a total shortening of ~117 km [*DeCelles and Coogan*, 2006].

The timing of PVT deformation has been inferred from both the clast composition in the Albian-Cenomanian San Pitch conglomerates as well as the age of the Cow Cyn Member of the CRC, which is believed to be undeformed by PVT imbricates [*DeCelles and Coogan*, 2006]. The PVT is characterized by the juxtaposition of lower Cambrian rocks against Jurassic units [*Burchfiel and Davis*, 1972; *Villien and Kligfield*, 1986; *DeCelles and Coogan*, 2006]. Subsequent deformation associated with the deeper structural levels of the PVT resulted in the Canyon Range culmination, which is defined as the progressive antiformal folding of the CRT sheet by imbricated Pavant thrust splays beneath the western side of Canyon Range [*DeCelles et al.*, 1995; *Mitra and Sussman*, 1997; *Ismat and Mitra*, 2001; 2005; *DeCelles and Coogan*, 2006]. The PVT displacement estimates across the Canyon Range and the northern Sevier Desert basin range from ~42-45 km, [*Sharp*, 1984; *DeCelles and Coogan*, 2006] whereas southern Sevier Desert basin

and Pavant Range are estimated to record ~26 km of displacement [*Royse Jr*, 1993]. An additional ~16-18 km of displacement and ~26 km of shortening were calculated from the PVT imbricates east of the Canyon- and Pavant- Range [*DeCelles and Coogan*, 2006].

From the Turonian through early Paleocene the PXT and GT displaced Cambrian over Jurassic rocks at depth, which shortened an additional ~30 km [*Mitchell and McDonald*, 1987; *Royse Jr*, 1993; *DeCelles and Coogan*, 2006]. This displacement played an important role of folding, passively carrying and exhuming the CRT and PVT thrust sheets.

Syn-Orogenic Deposits: Chronology and Depositional environment

The timing of Sevier deformation has been inferred from key structural and stratigraphic relationships found within the CRC and the IG [*Lawton*, 1982; *Standlee*, 1982; *Fouch et al.*, 1983; *Lawton*, 1983; 1985; *Mitra et al.*, 1994; *Constenius*, 1996; *Mitra*, 1997; *Constenius et al.*, 2003; *Lawton et al.*, 2007]. The syn-orogenic Cretaceous CRC is predominantly a succession of alluvial and fluvial deposits that sit unconformably above Proterozoic, Paleozoic and Mesozoic strata belonging to the Canyon Range, Pavant and Paxton thrust sheets [*Lawton et al.*, 2007]. The existing Albian (?) to possibly Maastrichtian CRC age constraints are derived from structural, compositional and stratigraphic correlations to surface and subsurface strata within the Pavant Range and Valley Mountains [*Lawton et al.*, 2007]. The CRC in the Canyon Mountains was formally divided by *Lawton et al.* [2007] into the Cow Canyon (Cyn), Wild Horse Cyn, Leamington Cyn, Pass Cyn, and Wide Cyn Members based on clast compositional

variations [*Dickinson et al.*, 1986; *DeCelles et al.*, 1995], pedogenic intervals and major angular unconformities. The CRC growth strata recorded deformation associated with PVT and CRT in the Canyon Range culmination, and also likely incorporated sediments derived from the emerging Santaquin culmination to the north.

The Cretaceous syn-orogenic strata of the IG west of the Wasatch Plateau are divided into the Sanpete Formation, Allen Valley Shale, Funk Valley and Sixmile Canyon Formation by *Spieker* [1946] based on lithotypes in the Sixmile Canyon area [*Lawton*, 1986b]. Subsequent work by *Jefferson* [1982], *Lawton* [1982, 1986], *Standlee* [1982] *Fouch et al.*, [1983] and *Willis* [1986] recognized Spieker's stratigraphic framework in other proximal foreland basin deposits from their litho-stratigraphic similarities and chronological constraints. A late Albian to late Campanian depositional age of the IG was determined by marine fossils and palynomorphs [*Fouch et al.*, 1983], and is partly corroborated by Cenomanian fission-track ages in the lower conglomeritic section of the Salina Canyon IG [*Willis*, 1986]. Changes in depositional facies have been attributed to the interplay between tectonic and eustatic forces and clastic compositional changes driven by the unroofing of the SFTB to the west predominantly the Canyon Range and Pavant thrusts [e.g., *Fouch et al.*, 1983; *Lawton*, 1985; 1986b; *Lawton et al.*, 2007]. More recently, clast composition and sandstone petrography from the upper IG (i.e., proximal Blackhawk and Castlegate time-equivalent strata) have evidenced the CNS role on Campanian foredeep strata composition [*Robinson and Slingerland*, 1998; *Horton et al.*, 2004]. The lower IG section includes the Sanpete, Allen Valley and Funk Valley Fms. and is characterized by interfingering non-marine and marine deposits with variable

thickness and varying depositional environments along strike [*Lawton*, 1986b]. The Sixmile Canyon Fm. was deposited as alluvial-fans that transition into meandering- and braided-fluvial environments to the east [*Lawton*, 1983; 1985; *Lawton et al.*, 1997; *Lawton et al.*, 2007]. The age and depositional environment of the CRC and the IG have been crucial to bracket the age of Sevier orogenic deformation, thus providing a chronological link between deformation and proximal sediment stacking [*Fouch et al.*, 1983; *Lawton*, 1985; 1986b; *Lawton and Trexler*, 1991; *Lawton et al.*, 1993; *Talling et al.*, 1995; *DeCelles and Coogan*, 2006; *Lawton et al.*, 2007].

SAMPLING STRATEGY

Systematic sampling of Proterozoic to Mesozoic sandstones belonging to the SFTB hinterland and most proximal foreland basin deposits was conducted in north and central Utah. These sample locations include the Canyon Mountains, Gunnison Plateau (San Pitch Mountains), Sixmile Canyon, Hop Creek (Cedar Hills), west of the San Rafael Swell and the Charleston-Nebo salient front (Figure 1.1). Bedrock sampling focused on three transects: two transects in the CRT on Neoproterozoic and early Paleozoic strata (Figure 1.2), and one in the NT on Proterozoic to early Mesozoic strata (Figure 1.3). The CRT sample transect includes samples from the western limb of the Canyon Range syncline along the Wild Horse Canyon and Oak Creek (Figure 1.2). Samples from the NT were collected from exposed Paleozoic and Precambrian strata associated with the Santaquin culmination, south of Dry Mountains (Figure 1.3). Late Cretaceous syn-orogenic deposits were sampled in four locations exhibiting facies transitions up

stratigraphic section: (1) east flank of the Canyon Range, (2) Gunnison Plateau (3) Sixmile Canyon and (4) Hop Creek (Figure 1.4). The Cow-, Wild Horse-, Leamington- and Pass- Cyn Members of the CRC were sampled in the Canyon Mountains. Additionally, samples were collected from the Sanpete, Allen Valley, Funk Valley and Sixmile Canyon Fms. within the IG. The Dakota Fm. was sampled west of the San Rafael Swell. See Figure 1.4 for approximate sample stratigraphic position and depositional facies. Sample GPS locations are in the Appendix A section Table 1a.

DETRITAL ZIRCON U-PB AND (U-TH)/HE METHOD

Detrital zircon U-Pb and (U-Th)/He applications

Detrital zircon (DZ) U-Pb and (U-Th)/He dating analyses provide crucial temporal and sediment provenance constraints to reconstruct paleogeography, drainages and deformational-unroofing episodes [e.g., *Rainbird et al.*, 1992; *Bruguier et al.*, 1997; *Stewart et al.*, 2001; *DeGraaff-Surpless et al.*, 2002; *Dickinson and Gehrels*, 2003; *LaMaskin*, 2012]. DZ U-Pb age provenance studies consist on identifying DZ U-Pb age components and their most likely equal age source terranes [*Reiners et al.*, 2005]. Constraints on maximum depositional ages (MDA) are provided by calculating the weighted mean of the youngest group of DZ U-Pb ages that overlap at 2σ [*Robb et al.*, 1990; *Dickinson and Gehrels*, 2009a; *Gehrels*, 2011; *Spencer et al.*, 2016]. Zircon single grain (U-Th)/(He-Pb) double dating can significantly improve provenance analysis by combining U-Pb crystallization ages and sourced thermal history [e.g., *Rahl et al.*, 2003;

Filleaudeau et al., 2012] (Figure 1.4). Zircon (U-Th)/He low-temperature thermochronology registers thermal events between ~140°-200°C [*Farley*, 2002; *Reiners et al.*, 2002; *Reiners*, 2005; *Wolfe and Stockli*, 2010]. In provenance studies that aim to use the thermal history of the source terranes as a discrimination factor for provenance, it is essential to discern between first-cycle volcanic grains, which are not thermally overprinted by significant burial from rapidly cooled blocks of the same zircon (U-Th)/He age [*Saylor et al.*, 2012]. By excluding this first-cycle volcanic grains it is possible to estimate DZHe lag time ages (Δ between DZHe age and sample stratigraphic age). The DZHe lag time is representative of the time it takes a zircon to travel from burial depths > 5km (depths dictated by closure temperature and geothermal gradient calculations) to the basin fill. The DZHe age estimates provide an excellent mean to reconstruct hinterland deformation and foreland basin evolutions in light of the source thermal history [e.g., *Brandon and Vance*, 1992; *Garver et al.*, 1999; *Ruiz et al.*, 2004; *Rahl et al.*, 2007; *Painter et al.*, 2014].

In contractional settings, such as the SFTB, the magnitude and rate of exhumation and cooling is modulated by, first, the amount of thrust sheet displacement (shortening) along a fault ramp, second, the ramp geometry, and thrird, the net erosion between tectonic and surface processes [e.g., *Spotila*, 2005]. The timing and magnitude of bedrock deformation can be assessed by a vertical array of ZHe ages sampled along an exhumed thrust fault hanging wall [e.g., *Spotila*, 2005]. The zircon grains deposited in the basin should preserve the progressive cooling/unroofing of these deformational events [e.g., *Reiners et al.*, 2005].

Data acquisition and processing

All zircon (U-Th)/He and in-situ U-Pb analyses were performed at the Jackson School of Geoscience, University of Texas at Austin Geo-thermochronometry Laboratory. Zircons for in-situ laser ablation U-Pb dating were separated using standard mineral separation methods. Zircons for each sample were placed on tape mounts and ablated at random inside a Helex vacuum cell connected to a PhotonMachine Analyte G.2 Excimer laser and Element 2 ICP-MS. The U-Pb dating procedure consisted in ablating a pit 30 μm in diameter by 16 μm in depth on the un-polished surface of the zircon grain. The primary and secondary reference standard were GJ1 [*Jackson et al.*, 2004] and Pak1 (in-house zircon standard ~42 Ma from Pakistan). U-Pb data was reduced using Iolite software and VizualAge [*Paton et al.*, 2011; *Petrus and Kamber*, 2012]. To achieve 95% confidence that we the incorporated DZ components that represented more than 5% of the total population, we analyzed approximately 120 zircon grains per sample [*Vermeesch*, 2004]. Only DZ ages with a percentage of discordance (i.e. discordance defined as 1-(^{206}Pb/^{238}U age/^{207}Pb/^{206}Pb age)*100) [*Gehrels*, 2011] smaller than 30 percent were included in the detrital analysis. The ^{206}Pb/^{207}Pb ages were chosen over ^{206}Pb/^{238}U ages when older than 1.2Ga to improve DZ age precision in the analysis [*Gehrels et al.*, 2008].

Zircons for (U-Th)/He age were selected as a function of DZ (U-Pb) components. DZ U-Pb ages with a percentage of discordance greater than 10 percent and geometrically inadequate for standard FT correction (i.e., flat, broken into multiple

pieces, rich in inclusions) were excluded. Zircon grains were placed inside a platinum package and inside a vacuum chamber were helium extraction was accomplished by diode laser heating at temperatures of ~1050°C. The extracted gas is spiked with ^{3}He for isotope dilution, purified using a charcoal cryogenic trap and a cold Zr-alloy getter system and ultimately analyzed with a Blazers Prisma QMS-200 quadrupole mass-spectrometer. This step is repeated until ^{4}He gas extractions are <1% of the total extracted ^{4}He. All zircons are then individually unpacked and spiked with a solution of known ratios of $^{235}/^{238}$U, $^{230}/^{232}$Th and $^{149}/^{147}$Sm, prior to dissolution. Zircon high-pressure dissolution involves the alternation of HF, HNO_3, and HCL acids. The resulting solutions were all analyzed on a Thermo Element2 ICP-MS. Zircon (U-Th)/He ages are calculated using isotope dilution techniques and age equation described in *Vermeesch* [2008].

RESULTS

Results structure

The bedrock zircon (U-Th)/He ages were divided and described below by individual thrust sheets: the Canyon Range and Charleston-Nebo salient. A description of SFTB bedrock DZ U-Pb age components is provided in Chapter 4. The inferred framework of North America magmatic provinces was taken from *Dickinson and Gehrels* [2010] and age ranges are shown below. The foreland basin detrital data discussion was divided in two stratigraphic sections belonging to the CRC and IG and subdivided into DZ U-Pb and DZHe ages. The SFTB and foreland strata DZ U-Pb and DZHe age

distributions and percentages are shown in greater detailed in Figure 1.5, and for isotopic data see Appendix A Tables 2a and 3a. Maximum depositional age following a similar *Dickinson and Gehrels*, [2009] nomenclature and procedure are shown in the same figure. Only significant changes in DZ and DZHe age populations in the CRC and IG stratigraphic sections are described below. Equal DZ U-Pb and DZHe ages (first-cycle volcanic DZHe ages), were excluded from DZHe strata populations, descriptions and figures below in order to provide only tectonic DZHe age components. Only Precambrian to Paleozoic DZ U-Pb show signs of post-crystallization resetting (see Tables 3a in the Appendix section). This indicates that DZ U-Pb ages younger than ~250 Ma are considered first-cycle volcanic and have not undergone major burial (enough to reset zHe ages) in this study section of the Cordilleran basin after crystallization.

Detrital zircon (U-Pb) inferred crystallization source

The DZ U-Pb ages here found on Precambrian to Mesozoic strata in the SFTB and foreland basin strata (Figure 1.7) have been previously associated with the following North America basement provinces of same age: The Archean cratons (ca. 2.8-2.5 Ga), Cratonic Paleoproterozoic suture belts (ca. 2-1.8 Ga), Yavapai–Mazatzal basement (ca. 1.9-1.5 Ga), anorogenic Mesoproterozoic plutons (ca. 1.5-1.3 Ga), Grenville basement and satellite plutons (ca. 1.3-0.9 Ga), uncertain origin (Cryogenian-Tonian rifting) (ca. 0.9-0.7 Ga), Peri-Gondwanan terranes (ca. 0.7-0.5 Ga.), Appalachian Paleozoic plutons (~0.5-0.3 Ga), and Cordilleran (250-150 Ma) and Sierran (128-80 Ma) volcanic arc

provinces [e.g. *Dickinson and Gehrels*, 2008a; 2010; *Lawton and Bradford*, 2011a; *Lawton et al.*, 2014]. These are major DZ U-Pb constituents on most pre-SFTB strata and Cretaceous Sevier-Laramide foreland basin [*Dickinson and Gehrels*, 2008a; *Lawton et al.*, 2010]. The DZ U-Pb age modes in the ensuing sections are labeled and attributed to these proposed North America basement provenances.

Zircon U-Pb and (U-Th)/He bedrock ages: Canyon Mountains

Precambrian strata in both transects in the Canyon Mountains exhibit four Precambrian DZ U-Pb modes: Grenville (57-66%), anorogenic Mesoproterozoic plutons (16-28%), Yavapai-Mazatzal (3-10%) and Archean craton (3-10%) DZ U-Pb ages. Cambrian strata include Grenville (17-47%), anorogenic Mesoproterozoic plutons (20-43%), Yavapai-Mazatzal (12-33%) and Archean craton (3%) DZ U-Pb ages (Figure 1.7).

Precambrian DZ U-Pb ages recorded Cambrian to Middle Miocene ZHe ages and are grouped together in lack of clear ZHe age distinctions (Figure 1.2). The Wild Horse Canyon transect shows a ZHe age distribution dominated by late Aptian- early Albian ages, whereas the Oak Creek transect shows mostly late Albian-Cenomanian ZHe ages (Figure 1.3). In addition, both transects have Jurassic DZHe age components with few Carboniferous and Permian DZHe ages.

Zircon U-Pb and (U-Th)/He bedrock ages: Charleston-Nebo salient

DZ U-Pb ages are available for the Mississippian Humbug Sandstones and Great Blue Limestone in the southern CNS and Pennsylvanian to Jurassic strata in the central

CNS, east of Provo (Figure 1.1). Precambrian and Cambrian strata in the southern CNS were not U-Pb dated in this study; nevertheless, it can be assumed that their DZ U-Pb age distributions resemble those in the CRT-PVT sheets as previous DZ U-Pb provenance studies on Neoproterozoic and Cambrian strata in the Provo and Sheeprock Mountains have shown similar DZ U-Pb signatures [e.g., *Stewart et al.*, 2001; *Yonkee et al.*, 2014]. The Mississippian Humbug Sandstones contains Grenville (71%) and Yavapai-Mazatzal (12%) with subordinate Appalachian plutons (5%) DZ U-Pb ages. The Great Blue Limestone comprises Grenville (30%), Appalachian plutons (21%), cratonic Paleoproterozoic belts (16%) and Yavapai-Mazatzal (11%) DZ U-Pb ages. The Pennsylvanian and Permian strata are combined due to almost identical DZ U-Pb age distributions, and are composed of Grenville (27-37%), Yavapai-Mazatzal (22-33%), Appalachian plutons (6-11%) and cratonic Paleoproterozoic belts (4-10%) DZ U-Pb age components. The lower Jurassic Nugget Sandstone contains Grenville (30%), Peri-Gondwana (25%) and Appalachian plutons (25%) DZ U-Pb ages.

In the southern CNS, Precambrian to Mississippian rocks (~5 km apart) yielded unimodal ZHe age distributions with a peak in the Cenomanian (Figure 1.3). The ZHe ages from the Mississippian Humbug Sandstone and Great Blue Fms. were 95 ± 8 Ma and 96 ± 5 Ma (population average ± 1σ), respectively. The Cambrian and Precambrian unit yielded a ZHe age of 110 ± 8 Ma and 97 ± 10 Ma, respectively (Figure 1.4). East of Provo, central CNS, the Pennsylvanian Wallsburg Ridge and the Early Permian Granger Mountain Fms. are characterized by ZHe ages younger than depositional age. The Wallsburg Ridge Fm. yielded ZHe ages ranging from Devonian to Cretaceous with a

prominent Early Cretaceous to Jurassic age mode. The Granger Fm, is dominated by Silurian, Carboniferous and Permian ZHe age modes and also includes a minor Early Cretaceous ZHe mode. The Permian Diamond Creek and Jurassic Nugget strata preserve ZHe ages older than the depositional age (Figure 1.3). The Diamond Creek yielded a dispersed Cambrian to Permian distribution of ZHe ages that overall cluster around the Devonian. The Jurassic Nugget Sandstone shows the same scatter as the Permian Diamond Creek Fm., but Silurian and Permian ZHe ages were the most abundant (Figure 1.3).

Detrital Zircon (U-Pb): Canyon Range Conglomerate

All members of the CRC in the Wild Horse Canyon contain four Precambrian DZ U-Pb age modes. The Cenomanian Cow Canyon Member is the oldest stratigraphic unit sampled along Wild Horse Canyon and its DZ U-Pb signature is comprised of Grenville (40%) anorogenic Mesoproterozoic plutons (23%), and Yavapai–Mazatzal (21%) DZ U-Pb ages. The overlying Turonian Wild Horse Cyn Member shows a significant reduction on Grenville orogen (19%) and Yavapai–Mazatzal basement (15%) and an increase in anorogenic Mesoproterozoic plutons (27%) and cratonic Paleoproterozoic suture belts (23%) DZ ages (Figure 1.5a). Stratigraphically higher portions of the Wild Horse Cyn Member yielded both a strong Appalachian Paleozoic plutons (13%) and Archean cratons mode (9%) as well as the lowermost occurrence of an early Neoproterozoic age component. The Archean mode becomes less prominent up-section. The Leamington Cyn Member shows a similar proportion of all four Precambrian DZ age modes with a small

Appalachian Paleozoic plutons DZ age cluster (3-7%). The Pass Cyn Member is characterized by a dominant Grenville DZ age mode that constitute 53-66%, followed by Yavapai–Mazatzal DZ U-Pb age mode (20-22%) and a substantial reduction on anorogenic Mesoproterozoic plutons DZ ages (11%). The Pass Cyn Member additionally shows a reduction on cratonic Paleoproterozoic belts ~1-7% compared to Leamington Cyn Member yielding 12-24% DZ age percentage. All percentages per sample are shown on Figure 1.5a.

Detrital Zircon (U-Th)/He: Canyon Range Conglomerate

Detrital ZHe ages from the CRC range from Neoproterozoic to Late Cretaceous (Figure 1.5a). The Cow Cyn Member is dominated by an Early Cretaceous (35%) DZHe age component peak at ~125 Ma and a Cenomanian (13%) DZHe age component. This DZHe population also includes two minor Paleozoic and a single Neoproterozoic age mode. The Wild Horse Cyn Member DZHe population appears to be dominated by Neoproterozoic (76%) DZHe ages in the lower part of the stratigraphic section and Paleozoic (55%) and Mesozoic (35%) DZHe ages in the upper part. The lower section of the Leamington Cyn Member shows a DZ distribution similar to the upper sample of the Wild Horse Cyn Member except for the lack of Jurassic DZHe ages. A stratigraphically higher Leamington Cyn Member sample shows a larger fraction of Mesozoic (48%) DZHe ages than the stratigraphically lower Leamington Cyn Member (20%). The Pass Cyn Member is almost exclusively composed of Mesozoic (90%) DZHe ages and contains minor Paleozoic (10%) ages and lacks Neoproterozoic DZHe ages (Figure 1.5a).

Detrital Zircon (U-Pb): Indianola Group and Dakota Formation

The Sanpete, Allen Valley, Funk Valley and Sixmile Canyon formations were sampled along the Chicken Creek in the Gunnison Plateau, the Sixmile Canyon, and Hop Creek in the Cedar Hills (Figures 1.1 and 1.4). The Indianola Group DZ U-Pb age distribution in general contains Cordilleran volcanic arc, Appalachian Paleozoic and early Neoproterozoic ages, in addition to the four Precambrian DZ U-Pb age modes encountered in the CRC. The Cenomanian Sanpete Fm. in the Gunnison Plateau and Hop Creek is dominated by Grenville (36-40%) DZ U-Pb ages and lesser contributions from anorogenic Mesoproterozoic plutons (9-10%) and Yavapai–Mazatzal (10-14%) DZ U-Pb ages. In contrast the Sanpete Fm. in the Sixmile Canyon shows dominant Sierran (49%) and Grenville orogeny (23%) ages (Figure 1.5c). The Sanpete Fm. in the Gunnison plateau has a strong Phanerozoic (22%) DZ U-Pb age fraction, including Carboniferous and Silurian DZ U-Pb ages (Figure 1.5b). The Turonian Allen Valley Fm. from the Gunnison Plateau comprises of Grenville (33%), early Neoproterozoic (11%) and Yavapai–Mazatzal (17%) DZ U-Pb ages. Funk Valley Fm. samples resemble the Sanpete Fm. Precambrian DZ U-Pb ages (Figure 1.5), and show a slightly reduced Phanerozoic (~4%) and late Neoproterozoic (5%) DZ age components. The lower-most Sixmile Canyon Fm. in the Gunnison plateau is characterized by Precambrian DZ U-Pb age modes with only subsidiary Phanerozoic (4-12%) and late Neoproterozoic (2-11%) DZ age components. In the Sixmile Canyon area, the Sixmile Canyon Fm. recorded the same Precambrian DZ U-Pb age components as in the Gunnison Plateau; however, the relative abundance of ages associated with Cratonic Paleoproterozoic belts increased substantially

from 17% to 46%, whereas Cordilleran-Sierran modes are absent. The upper Sixmile Canyon Fm. shows a high abundance of Grenville (37%) DZ ages as well as anorogenic Mesoproterozoic (23%), Yavapai–Mazatzal (12%) and Neoarchean (10%) DZ ages. Both the Phanerozoic and Neoproterozoic DZ U-Pb ages constitute only 2% of the DZ age population. In the Hop Creek, quartzite-rich alluvial fan facies in the Sixmile Canyon Fm. [*Jefferson*, 1986] exhibit a DZ U-Pb age distribution that resembles the mid-to-upper Sixmile Canyon Fm. DZ U-Pb in the Sixmile Canyon area. The Price River Fm. sampled above the IG, in the Sixmile Canyon area record all four Precambrian populations, with the most abundant DZ mode being cratonic Paleoproterozoic (35%), followed by Grenville (26%), anorogenic Mesoproterozoic (16%), Yavapai–Mazatzal (10%) and Phanerozoic (4%) DZ U-Pb ages (Figure 1.5c). All samples also contain minor amounts of Archean zircon (3-13%) (Figure 1.5).

The Cenomanian Dakota Fm. (time-equivalent to the Sanpete Fm.) was additionally sampled west of the San Rafael Swell from (1) the lower carbonate-rich coarser clast facies and (2) upper sandy facies [*Yingling and Heller*, 1992]. It DZ U-Pb age population is composed of Mesozoic (4-9%), Paleozoic (13-18%), late Neoproterozoic (11-16%), late and early Mesoproterozoic (30-34 and 7-9%), late Paleoproterozoic (16-17%) and Neoarchean (3-4%) ages (Figure 1.5e).

Detrital Zircon (U-Th)/He: Indianola Group and Dakota Formation

DZHe ages in the IG range from Cambrian to Late Cretaceous in age (Figure 1.5). In the Gunnison Plateau, the Sanpete and Allen Valley Fms. record a high frequency of Carboniferous-Permian (48-56%) with subordinate Mesozoic (18-24%) DZHe ages. The Funk Valley and lower Sixmile Canyon Fms. systematically record an increased component of Jurassic-Early Cretaceous (37-58%) DZHe ages with modal peaks between 167-175 Ma. Triassic and Permian DZHe ages constituted 7-30% and 14-19%. The bottom Sixmile Canyon Fm. preserves a prominent Carboniferous (26%) mode, and subordinate Triassic (16%), Devonian (11%), Permian (11%), Jurassic (11%), and Early Cretaceous (5%) DZHe age components. An 11% to 5% reduction in Early Cretaceous DZHe ages was recorded from the upper Funk Valley to the Sixmile Canyon Fms. (Figure 1.5b). The Sixmile Canyon area, the Sanpete Fm. is dominated by a Carboniferous (26%) DZHe mode, whereas the Funk Valley Fm. is characterized by Early Cretaceous (37%), Jurassic (22%) and Carboniferous (17%) DZHe ages. The lower Sixmile Canyon Fm. has equal proportions of Jurassic (25%) and Carboniferous (25%) DZHe ages. The middle Sixmile Canyon Fm. shows disperse Mesozoic to Precambrian DZHe ages. The upper Sixmile Canyon Fm. is composed of Jurassic (15%), Permian-Triassic (21%) and Devonian-Silurian (27%) DZHe age modes. The Price River sample is dominated by Jurassic (35%) and Carboniferous-Devonian (32%) DZHe ages (Figure 1.5c). In the Hop Creek, the Sanpete Fm. DZHe age population has two Paleozoic DZHe age modes - Carboniferous (29%) and Devonian-Silurian (47%) (Figure 1.5d). The

Sixmile Canyon Fm. contains Mesozoic (68%), Jurassic (38%), Late Cretaceous (17%), Permian (16%), and Early Cretaceous (11%) DZHe ages (Figure 1.5d).

Lower and Upper Dakota Fm. DZHe ages are mostly Paleozoic (67% in both samples) as well as Devonian (9-18%), Carboniferous (35-12%), Permian (9-18%), and Triassic (9-12%) DZHe componets (Figure 1.5e). Both the lower and upper Dakota Fm. contain Cretaceous DZHe ages some of which are indistinguishable from depositional age (Figure 1.5e).

DISCUSSION

Timing of Pavant and Nebo Thrust exhumation

Although trusting episodes have commonly been indirectly constrained in the SFTB from provenance, growth strata, and fault and stratigraphic cross cutting relationships [e.g., *Armstrong*, 1968; *DeCelles et al.*, 1995; *Constenius et al.*, 2003; *DeCelles*, 2004; *DeCelles and Coogan*, 2006], the temporal resolution achieved is limited by the sedimentary age control and unknown deformation progression between depositional hiatus. This precludes a robust quantification of timing and magnitude of thrusting. To provide direct constraints and confirm the timing and magnitude of rapid exhumation, we applied zircon (U-Th)/(He-Pb) dating on two sample transects in the CRT-PVT and NT sheets (Figures 1.2 and 1.3). The (U-Th)/He data constrains peak

deformation for both the PVT and NT to be Cenomanian. The (U-Th)/He ages per bedrock transect are described below and DZ U-Pb ages are shown in Figure 1.7.

Timing of Pavant thrust and Canyon Range thrust sheet exhumation

DZHe ages derived from the Precambrian through Cambrian units in the Canyon Range thrust sheet suggest these rocks were heated to temperature within the range of the zircon PRZ. Therefore, the ZHe age results were likely influenced by the individual zircon He age and diffusion kinetics, and is in part influenced by radiation damage [e.g., *Nasdala et al.*, 2003; *Palenik et al.*, 2003; *Nasdala et al.*, 2004; *Shuster and Farley*, 2009; *Guenthner et al.*, 2014]. In order to provide a ZHe record less influenced by radiation damage, ZHe ages showing an observable dependency to alpha dosage (used as a proxy for radiation damage) were excluded (see supplementary material for individual aliquot data). The "maximum" alpha dosage was calculated by incorporating the zircon U-Pb age and U-Th-Sm values from whole-grain solution ICP-MS measurements into the alpha dosage equation of *Palenik et al.* [2003]. The systematic decrease of ZHe ages was observed at maximum alpha dosages greater or equal to $10^{\wedge 18}$ α/mg (Figure 1.6). The alpha dosage values in which ZHe decreases is in agreement with experiments showing that He retention increases at alpha dosages between $10^{\wedge 16}$ -$10^{\wedge 18}$ α/mg and decreases at $10^{\wedge 18}$ α/mg [*Guenthner et al.*, 2013; *Guenthner et al.*, 2014]. It is important to note that the maximum alpha dosage values presented in this study do not account for post-crystallization zircon annealing, thus potentially overestimating alpha dosage [*Guenthner et al.*, 2013]. The remaining distribution of ZHe ages is older than Turonian (single

youngest ZHe age with calculated alpha dosage below $10^{\wedge 18}$ α/mg, 91.7 ± 7.3 Ma) (Figure 1.2 and 1.6). Commonly, zircon grains have slightly different He retention kinetics and thus a single age does not represent the overall population. We selected the youngest ZHe overlapping at 2σ error of the youngest grain to calculate a weighted mean (n=5 out of N=89, 94.7 ± 3.2 Ma, MSWD 0.47), which represents the youngest age the CRT sheet was at or near the ZHe PRZ (Figure 1.2). Rapid cooling along the main PVT detachment in the Cenomanian is inferred from the magnitude of exhumation required (>5-6 km) to be exposed at the surface. The Cenomanian ZHe-PRZ before deposition of the slightly younger Cow Canyon conglomerates here constrained to have a maximum depositional age 94.8 ± 4.2 Ma, MSWD 0.45 by using the youngest three DZHe ages with alpha dosage below $10^{\wedge 18}$ α/mg. These ZHe ages places the onset of peak Pavant deformation slightly younger than previously proposed [e.g., *DeCelles and Coogan*, 2006] between 94.7 ± 3.2 Ma and the depositional age of the oldest CRC.

Nebo Thrust Exhumation

In the hanging wall of the NT, ~5 km of Precambrian to Carboniferous stratigraphic section yields invariant ZHe ages with an average Cenomanian ZHe age (Figure 1.3). The Cenomanian ages across the entire stratigraphic section indicates rapid tectonic cooling and exhumation during Nebo thrusting. The early Permian-Pennsylvanian strata of the Oquirrh Group, east of Provo, exhibit some ZHe ages that are younger than the depositional age (Figure 1.3). This suggests there was partial resetting of ZHe ages. In contrast, ZHe ages from the early Permian Diamond Creek and Early

Jurassic Nugget Fms. preserve Paleozoic detrital cooling ages, which are known to be unaltered by post depositional burial or Sevier deformation by the presence of unreset volcanic zircons (DZ = DZHe age). These stratigraphic ZHe age relationships indicate that the fossil, pre-shortening ZHe PRZ was located between the Pennsylvanian Wallsburg Ridge and early Permian Granger Mountain Fms. during Cenomanian times. These ZHe ages derived constraints for rapid Nebo hanging wall exhumation are consistent with Albian-early Cenomanian $^{40}Ar/^{39}Ar$ K-spar multi-diffusion domain ages from Proterozoic rocks [*Constenius et al.*, 2003]. Early Devonian and Carboniferous-Permian DZHe cooling ages found in the Diamond Creek and Nugget Sandstones Fm. are consistent with Appalachian and Ancestral Rocky Mountains cooling and genesis (Chapter 4) [e.g., *Dickinson and Gehrels*, 2003; *Rahl et al.*, 2003; *Dickinson and Gehrels*, 2008a].

Canyon Range Conglomerate and Indianola Group provenance and unroofing

Detrital zircon (U-Th)/(He-Pb) double dating was conducted in the CRC and IG sandstones within conglomeratic coarse-clastic facies and sandstones in order to build on existing compositional sediment provenance analysis. The aim of this work is to provide insights into the CRT-PVT and NT unroofing histories on the basis of refined provenance analysis and provide detrital low-temperature thermochronometric constraints. The CRC and IG results are described in two sections below.

Canyon Range Conglomerate: Canyon Mountains

Compositional variations up-stratigraphic-section in the CRC was subdivided into three petrofacies: quartzose-, carbonate-, mixed- (quartzose-carbonate) clast petrofacies *[DeCelles et al.,* 1995 and *Lawton et al.,* 2007]. Clast composition, depositional environments and paleo-current analysis strongly suggest predominant sediment derivation from the CRT hanging wall in the Canyon Range culmination and potentially from the Provo salient [e.g., *Lawton et al.,* 2007]. DZ U-Pb age signatures in the CRC agree with overall clast composition and sources proposed by *DeCelles et al.,* [1995] and *Lawton et al.,* [2007]; with quartzose-rich units yielding Cambrian-Precambrian DZ ages and mixed-clast units yielding Paleozoic to Precambrian DZ ages (Figure 1.5a). This suggests identical sources for sand and gravel size detritus. Analysis of the DZHe ages, DZ U-Pb percentage trends, and Paleozoic DZ U-Pb modes up stratigraphy suggest that the CRC recorded two distinct unroofing episodes.

The first unroofing episode is recorded in the quartzite-rich upper Cow Cyn Member. The Cow Cyn Member yielded only Precambrian DZ ages (i.e., provenance assemblage A-B), zero DZHe depositional lag times, and a DZHe age distribution dominated by Cenomanian and Barremian-Aptian- (~125 Ma) ages (Figure 1.5a). The DZ and DZHe U-Pb ages suggest the upper Cow Cyn Member was manly sourced from Precambrian- lower Paleozoic strata that underwent rapid exhumation in the Cenomanian (~95 Ma). Barremian-Aptian cooling of Precambrian- lower Paleozoic strata is supported by the abundance of Barremian-Aptian DZHe ages, which lends support to the proposed

Neocomian age for the Buckhorn Conglomerate [*Currie*., 1998]. The Buckhorn Conglomerate has been associated to the initiation of SFTB in Central Utah based on the extent of coarser clast facies, however, the lack of westward stratigraphic thickening, characteristic of foreland basin deposition, and lack of age control has render enigmatic its association with the onset of Sevier deformation [*Heller and Paola*, 1989]. Early Paleozoic-Precambrian strata with Barremian-Aptian DZHe ages were likely exposed at the surface during the earliest stages of Canyon Range culmination formation, or alternatively, could have been derived from the Sevier culmination [e.g., *DeCelles*, 2004; *DeCelles and Coogan*, 2006].

In an abrupt shift from solely Precambrian DZ ages and Barremian-Aptian DZHe ages, the overlapping Wild Horse Canyon Member displays Devonian-Carboniferous DZ U-Pb ages (commonly found in Carboniferous bedrock strata (Figure 1.5a)) and is dominated by Precambrian-Paleozoic DZHe ages (Figure 1.5a). This shifts coincides with the mixed-clast petrofacies that includes detritus of Mississippian horn coral limestone (Joana Lms.) clasts in addition to Cambrian-Devonian limestone units and Precambrian-Cambrian quartzite clasts [e.g., *Lawton et al.*, 2007]. This marks a distinctive break in CRC sediment provenance and concurs with the overall petrofacies break between an early stratigraphic package dominated by carbonate-, quartzose-, and mixed-clast petrofacies and a transition to exclusively quartzose- and mixed-clast petrofacies strata.

The DZHe age distribution from the Wild Horse Cyn Member transition from predominantly Precambrian and Paleozoic ages to mainly Jurassic and Cretaceous ages in

the Pass Cyn Member (Figure 1.5a). The Pass Cyn Member exhibits solely Precambrian DZ U-Pb ages and Jurassic-Cretaceous DZHe ages, which is consistent with Cambrian-Precambrian strata from the CRT sheet and in agreement with previously proposed sources for the quartzose petrofacies [e.g., *DeCelles and Cogaan*, 2006; *Lawton et al.*, 2007]. The short DZHe lag time ages for the Pass Cyn Member suggest rapid exhumation of Precambrian quartzites (Figure 1.9). The presence of shorter ZHe lag times coincides with the increase in Grenville DZ U-Pb ages and decrease in Appalachian DZ U-Pb ages from the Wild Horse Cyn Member onwards (Figure 1.5a), which indicates that the CRC records the unroofing of the upper Paleozoic to Precambrian strata during Canyon Range culmination growth (Figure 1.5a).

The provenance shift between the Cow Cyn and Wild Horse Cyn Member could be the result of various tectonic and eustatic events taking place synchronous with CRC deposition. Cenomanian rapid exhumation in the PVT and NT, or Canyon range culmination growth may have prompted a significant paleogeographic change altering drainage patterns and thus sediment derivation. Given the proximity of the Provo salient to the CRC, the documented kinematic linkage between Provo structures and the CRT [e.g., *Kwon and Mitra*, 2006] and the lack of upper-Paleozoic strata in the CRT hanging wall and footwall in the Late Cretaceous [e.g., *DeCelles et al.*, 1995; *DeCelles and Coogan*, 2006] it is feasible that Paleozoic DZ U-Pb and DZHe ages were derived from sources exhumed in the Provo salient by Nebo thrusting, potentially the Paleozoic sections in the Sheeprock or Tintic thrust sheets. Alternatively, the provenance shift could be the results of culminations growing in the western hinterland portions of the CRT

hanging wall, containing upper Paleozoic strata. In either scenario, however, the combined provenance data shows alternations from local and regional thrust sheets derivation.

Indianola Group: Gunnison Plateau

The syn-orogenic Cretaceous strata of the Gunnison Plateau provides a proximal record of alluvial fans, braided fluvial, and delta plain deposits that are intricately connected to hinterland deformation and transfer of crustal load [e.g., *Lawton*, 1985; 1986b]. Erosional denudation of the SFTB is manifested in the IG by the up-section decrease of carbonate clasts from the Sanpete Fm. to the Sixmile Canyon Fm. and has been interpreted to record a single unroofing sequence of the Cordilleran miogeoclinal [*Lawton*, 1986b]. The progressive increase in Precambrian DZ U-Pb ages and younging of DZHe ages over time in the Gunnison Plateau transect supports progressive hinterland denudation (Figure 1.5b). The Sanpete and Allen Valley Fms. contains Carboniferous-Permian DZHe age modes and Appalachian plutons and Peri-Gondwana DZ U-Pb ages that correlate best with DZ found in the upper Oquirrh Group and even Jurassic units sampled in the CNS (Figure 1.7). This is inconsistent with exclusive sourcing from the CRT hanging wall or recycle CRC that contain solely Paleozoic to Precambrian DZ U-Pb ages (Figure 1.5a). It is therefore very likely that the upper Paleozoic-Mesozoic DZ U-Pb ages were sourced from early Mesozoic and Paleozoic strata eroded from within the easternmost PVT front [e.g., *DeCelles and Coogan*, 2006] and/or from same age strata

that were contemporaneously thrusted and folded by the NT in the CNS [e.g., *Constenius et al.*, 2003].

Funk Valley and Sixmile Canyon Fms. are characterized from Sanpete and Allen Valley by more abundant Middle Jurassic DZHe ages, which imply derivation from pre-Oquirrh group strata in the CNS and CRT-PVT Precambrian-Cambrian bedrock. Kinematic reconstructions by *DeCelles and Coogan*, [2006] indicate that another potential source to consider is exhumation of early Mesozoic deposits during Pavant-Paxton frontal folding and duplexing, i.e. the Levan culmination west of the Gunnison Plateau. The lack of Cordillera volcanic arc DZ modes encountered commonly in early Mesozoic strata makes this scenario unlikely [e.g., *Dickinson and Gehrels*, 2003; *Dickinson and Gehrels*, 2008a; b].

Indianola Group: Sixmile Canyon

The IG in the Sixmile Canyon area preserves shallow marine to meandering and braided fluvial deposits as down-dip equivalents to the Gunnison Plateau stratigraphy [*Lawton*, 1986b]. Both the Sixmile Canyon and the Gunnison Plateau show a decrease in Paleozoic-Mesozoic DZ U-Pb ages up stratigraphic section (Figure 1.5b-c) and record the appearance of a significant Jurassic DZHe age mode in the Funk Valley Fm. (Figure 1.5c). However, the DZ U-Pb and DZHe ages do not preserve a simple unroofing sequence, which is most likely due sediment recycling and mixing of multiple sources integrated in a larger catchment area.

The distribution of DZ U-Pb ages from the middle Sixmile Canyon Fm. through the Price River Fm. is significantly different to the underlying Sanpete and Funk Valley Fms., and is dominated by Yavapai-Mazatzal DZ U-Pb ages characteristic of the upper Paleozoic section sampled in the NT (Figure 1.8). The Sanpete Fm. shows a unique late Cenomanian volcanic-arc DZ age mode when compared to time-equivalent northwest strata in the Gunnison Plateau or CRC (Figure 1.5a-c). Recent provenance studies within the Late Cretaceous Straight Cliffs and Kaiparowits Fm. document south-to- north axial drainage systems that delivered Cordilleran and Sierran volcanic-arcs and Mogollon Highland sediments to the foreland basin, based on sedimentological, petrographic and DZ U-Pb [e.g., *Lawton et al.*, 2014; *Szwarc et al.*, 2015]. Abundant Cenomanian DZ U-Pb ages in the Sanpete Fm. sample were likely delivered from the south, given the lack of similar DZ U-Pb ages in equivalent strata to the west (Figure 1.5). The Sanpete Fm. sampled yielded maximum depositional ages as young as Turonian (Figure 1.5c) in the Sixmile Canyon and may mark the earliest record of axial drainage evolution driven in part by the onset of a major transgression in the Late Cretaceous Sevier foreland basin. The Funk Valley Fm. and overlying formations consistently recorded Late Jurassic to Early Cretaceous DZHe age mode with no indication of younging of DZHe ages (Figure 1.5c). Paleozoic DZHe age modes associated with middle Mesozoic and late Paleozoic sources were found as well, but not recognizable unroofing pattern up-section is evident.

Indianola Group: Hop Creek (The Cedar Hills)

Relative to the Sixmile Canyon and Gunnison Plateau stratigraphic sections, previous clast compositional analysis in the Cedar Hills have shown no compositional clast trends; interpreted to be a consequence of the unroofing of a structurally complex section and not exclusively derived from a single thrust-faulted allochthon [*Jefferson*, 1982]. Paleozoic and Mesozoic DZ U-Pb ages and the lack of Mesozoic DZHe ages within the Sanpete Fm. suggest derivation from predominantly Mesozoic and Paleozoic strata with subordinate derivation from Precambrian strata. This is not evident in the DZ age record but is deduced from Precambrian clasts previously documented in the Sanpete Fm. [*Jefferson,* 1982]. This agrees with all other Sanpete Fm. samples.

We hypothesize Precambrian clasts were most likely derived from southern sources, such as the CRT hanging wall where Precambrian basement was already contributing sediments to the basin prior the Cenomanian [e.g., *DeCelles et al.*, 1995; *Currie*, 1998b; *Lawton et al.*, 2007]. This is based on the consistent Precambrian clast counts (10-20%) [*Jefferson*, 1982] up-section, and because previous structural reconstructions of the Provo Salient places Precambrian basement at the surface only in the Sheeprock thrust sheet by the Campanian-Paleocene (ca. 80-55) [e.g. *Kwon and Mitra,* 2004b; a]

Sample proximity to the CNS, depositional environment, clast composition [e.g., *Jefferson,* 1982], and onset of Cenomanian NT and DZHe ages indicate that Mesozoic and upper Paleozoic DZ U-Pb were more likely sourced from the CNS front. There was likely also subordinate input from Precambrian and early Paleozoic DZ sources from the

south. In the Sixmile Canyon Fm., the presence of Late Jurassic-Late Cretaceous DZHe ages, abundance of Grenville U-Pb ages and lack of Mesozoic and Peri-Gondwana DZ U-Pb ages suggest the upper Sixmile Canyon Fm was derived from Precambrian and Paleozoic strata from the CRT-PVT. The presence of Appalachian plutons DZ U-Pb and Paleozoic DZHe ages in combination with DZ evidence mentioned above also implicates the NT Carboniferous-Permian Oquirrh strata (Figure 1.7).

Dakota Formation

The Cenomanian Dakota Fm. has been extensively studied for composition, grain size distribution, and depositional environment [e.g., *Yingling and Heller*, 1992; *Currie*, 1998a]. It is time equivalent to the Sanpete Fm. west of the Wasatch plateau and its gravel-dominated intervals extend into the Green River area [*Yingling and Heller,* 1992]. The Dakota Fm. conglomerates are composed mostly of chert and quartzite clasts and are overlain by shales and quartzarenites with paleocurrents indicating NE-directed transport [*Yingling and Heller*, 1992]. The Dakota Fm. DZ U-Pb ages yielded a strong Appalachian and Peri-Gondwana age modes, which are diagnostic for Jurassic Nugget sandstone derivation (Figure 1.7), and with a small percentage of Sierran volcanic arc DZ U-Pb ages. DZHe ages are largely Paleozoic (>74%) with subordinate Mesozoic age components. This suggests derivation from Mesozoic and Paleozoic sources especially upper Paleozoic and Mesozoic sources not reset by SFTB deformation.

A small fraction of non-volcanic DZHe ages were indistinguishable from depositional age (Figure 1.8) identical to CRT-PVT bedrock cooling ages and lower CRC

strata lag time ages. Based on the lack of Cenomanian DZHe ages in the time equivalent Sanpete Fm. (e.g., Hop Creek, Gunnison Plateau and Sixmile Canyon) and general NE-directed transport [*Yingling and Heller*, 1992; *Currie et al.*, 2008], Cenomanian DZHe ages are inferred to be derived from rapidly-exhuming Precambrian and lower Paleozoic strata of the CRT-PVT sheets. The short lag-time Cenomanian DZHe ages in the Cow Cyn Member and Dakota Fm. combined with direct evidence for synchronous exhumation of the PVT and NT provides a direct temporal and causal link between coarse clastic deposition and hinterland thrust-sheet exhumation in the Cenomanian.

MDS multi-sample comparison between hinterland and proximal foreland basin

While the association between North America provinces and DZ U-Pb ages is well established for Precambrian to Mesozoic SFTB and foreland basin strata [e.g., *Gehrels and Dickinson*, 1995; *Dickinson and Gehrels*, 2008a; 2009b; 2010; *Lawton et al.*, 2010; *Lawton and Bradford*, 2011b; *Laskowski et al.*, 2013], no study has employed large DZ U-Pb population sample sets to track the progressive unroofing of the SFTB in Late Cretaceous CRC wedge-top and IG foredeep strata. Multi-dimensional scaling (MDS) is employed to compare nearly a 100 samples, encompassing Precambrian through Mesozoic strata, to evaluate DZ population similarities between bedrock in the SFTB and Late Cretaceous stratigraphic transects in the most proximal foreland basin (Figure 1.8).

The MDS sample comparison includes published DZ U-Pb data from Permian, Triassic and Jurassic strata [i.e., *Dickinson and Gehrels*, 2003; *Dickinson and Gehrels*, 2008a; b; *Dickinson and Gehrels*, 2009b] and incorporates new dates from over 49

Precambrian through Cretaceous samples (Figure 1.8). This study compares multiple time-equivalent samples to enhance source provenance. The MDS plot shows four distinct provenance assemblages. The four assemblages are Precambrian, Cambrian, Pennsylvanian-Permian and Triassic-Jurassic strata (Figure 1.8). Figure 1.7 summarizes individual CRT-PVT and NT Precambrian to Mesozoic strata DZ U-Pb age population on KDE and histograms. Late Cretaceous syn-orogenic DZ provenance was inferred by sample proximity to the four MDS source assemblages.

The MDS plot suggests a provenance shift for the post-Cenomanian proximal foredeep strata. Cenomanian Dakota and Sanpete Fms. show an affinity to Triassic-Jurassic source assemblage. In contrast, the Turonian-Campanian Funk Valley and Sixmile Canyon Fms. are characterized by a greater affinity to Precambrian-Paleozoic source assemblages (Figure 1.8). This provenance shift followed a mayor SFTB exhumational episode recorded in the CRT-PVT and NT Precambrian-Paleozoic strata suggesting they became the mayor source of foredeep DZ U-Pb after and potentially as a consequence of rapid frontal SFTB exhumation. Turonian-Santonian strata seem to fall in an intermediate field within the Precambrian-Paleozoic source assemblages, suggesting the influence of multiple provenances (Figure 1.8). The lower section of the Sixmile Canyon Fm. in the Gunnison Plateau, Sixmile Canyon and Cedar Hills recorded contributions from all provenance assemblages, but predominantly Precambrian-Paleozoic sources from the SFTB. In the middle-upper Sixmile Canyon and lower Price River Fms. the continued unroofing of the SFTB restricted provenance to sources in the Pennsylvanian-Permian strata in the CNS (Figure 1.8).

The CRC show a lack of input from Mesozoic DZ U-Pb source assemblages. The Cow Cyn and Pass Cyn Members DZ U-Pb ages were indistinguishable from Cambrian-Precambrian strata. The Wild Horse Cyn and the Leamington Cyn Members show an affinity to Carboniferous-Permian strata, potentially from the CNS (?) (Figure 1.8). The MDS comparison of CRC suggests that from the Cenomanian to the Campanian the wedgetop basin was mostly internally drained from exposed Precambrian-Cambrian CRT-PVT bedrock strata with input from Provo salient upper Paleozoic sources. The multi-source nature of the Late Cretaceous IG foredeep strata suggests derivation other than only CRT-PVT and/or wedge-top CRC. The multi-sample MDS source comparison shows the influenced of progressive hinterland unroofing and thrust-belt evolution in different portions of the SFTB on sediment allocation and basin compartmentalization in proximal non-marine and marine sections of the foreland basin.

Clast composition and zircon U-Pb discrepancies on Cenomanian strata

Clast and sandstone composition data from lower-Late Cretaceous strata from the Sevier foreland basin strata in central Utah unequivocally show ubiquitous input of Paleozoic clasts [*Lawton and Mayer*, 1982; *Lawton*, 1982; 1983; 1986b; *DeCelles et al.*, 1995; *Currie*, 1998b; 2002; *Lawton et al.*, 2007]. In contrast, however, statistical comparison of DZ U-Pb ages shows a significant input from Mesozoic strata (Figure 1.8). The pre-SFTB DZ U-Pb populations are characterized by Mesozoic DZ U-Pb ages accompanied by recycled Precambrian to Paleozoic DZ U-Pb ages. The Paleozoic to Mesozoic DZ U-Pb sources are further corroborated by Paleozoic DZHe age recording

cooling ages in agreement with DZHe ages obtained from Upper Carboniferous to Jurassic strata in this study and from Jurassic strata [*Rahl et al.,* 2003]. Homogenization of DZ U-Pb age modes by repeated recycling renders it difficult to identify the input or influence of older DZ U-Pb age populations on younger strata. Thus a change in DZ U-Pb population will not always be recognizable in early syn-deformational strata or represent the true onset of deformation. Some of the causes could be related to reduced zircon fertility [e.g., *Moecher and Samson,* 2006] in Carbonate Paleozoic strata, lack of Paleozoic clasts degradation in proximal strata and/or negligible sediment contribution from recently exposed Precambrian units.

Depositional Age Constraints

Accurately determining the stratigraphic age of the CRC and IG is paramount when attempting to reconstruct the deformational and exhumational history of the SFTB [e.g., *DeCelles et al.*, 1995; *DeCelles*, 2004; *DeCelles and Coogan*, 2006; *Lawton et al.*, 2007; *Guenthner et al.*, 2014] and its relationship to sediment dispersal and staking patterns. So far the only chronostratigraphic constraints for the CRC stem from apatite fission track data, which provides a maximum depositional age of ~97 Ma for the lower CRC [*Stockli et al.*, 2001], and Turonian-Cenomanian palynology ages in the middle CRC part (?) [*DeCelles and Coogan,* 2006]. Additional chronology have been provided by detailed mapping and stratigraphic correlations to IG depositional facies [*Christiansen,* 1952; *Armstrong,* 1968; *Stolle*, 1977; *DeCelles et al.*, 1995; *Lawton et al.*, 2007]. Stratigraphic ages in the IG were determined by marine fossils or palynomorphs

[*Fouch et al.*, 1983], scarce fission track ages [*Willis*, 1986] or stratigraphic correlations [e.g., *Jefferson*, 1982; *Lawton and Mayer*, 1982]. DZ U-Pb maximum depositional ages (MDA) and unreset short lag time DZHe ages support and provide critical new ages constraints on different units on the CRC and IG. The MDA was determined using the weighted average of the youngest 2 or more DZ ages overlapping at 2σ (YC2σ(2+)) [e.g., *Dickinson and Gehrels*, 2009a]. The MDAs are given first for the CRC, the Gunnison Plateau, Sixmile Canyon and Hop Creek and MSWD (mean square weighed deviation) are shown in Figure 1.5. Multiple attempts were made to get the youngest possible DZ ages from the CRC by only analyzing euhedral grains (see Appendix A Table 2a), the youngest single Cretaceous DZ age found was 94 ± 3 Ma in the Pass Canyon Member. The second youngest DZ ages was early Carboniferous and was found in the Wild Horse Cyn Member. The three youngest DZHe ages in the Cow Cyn Member yielded a weighted average of 94.8±4.2 Ma and in the Pass Cyn. Member the youngest 2 DZHe ages average and standard deviation is 76.7 ± 6.7 Ma, we consider both as MDAs.

In the Gunnison Plateau, the Sanpete Fm. yielded a MDA of 112.6 ± 1.8 Ma, the Allen Valley (?) Fm. 92.1 ± 1.4 Ma, and bottom Sixmile Canyon Fm. 84.4 ± 3.1 Ma. In the Sixmile Canyon MDAs are: Sanpete Fm. 91.8±0.8 Ma, Funk Valley Fm. 88.0±6.9 Ma, and the upper Sixmile Canyon Fm. 75.1 ± 1.2 Ma. In the Hop Creek area, the Sanpete Fm. yielded a 104.5 ± 1.0 Ma MDA. The MDAs derived from the IG and CRC agree almost entirely with previously constrained ages by fauna and stratigraphic correlations by *Fouch et al.* [1983] and *Willis* [1986] and represent some of the first direct geochronological age constraints for those formations.

Hinterland Exhumation and Depositional Model

The youngest DZHe ages found on each formation and member were plotted against stratigraphic age (after excluding first-cycle volcanics) to estimate depositional lag time ages and provide constraints on the SFTB exhumation history in relation to stratigraphic units in the proximal foreland basin (Figure 1.9). The Cenomanian Cow Canyon Member and Dakota Fm. contain DZHe ages that are indistinguishable from their stratigraphic age, which would require coeval rapid exhumation in the SFTB. The ZHe thermochronometric constrains in both the PVT and NT support these ages and indicates synchronous deformation along a large segment of the frontal SFTB in the Cenomanian. The significant presence of Paleozoic DZHe ages and Paleozoic-Mesozoic DZ U-Pb ages in proximal Cenomanian foredeep strata suggest derivation from adjacent exhuming Paleozoic to Jurassic strata from the easternmost frontal PVT and NT sheets. Mesozoic DZHe ages also implies minor sourcing from Precambrian-Paleozoic strata rapidly exhumed in the CRT sheet and recycle wedgetop CRC.

Ensuing rapid Cenomanian hinterland exhumation, sediment provenance appears to shift simultaneously in both the wedgetop (CRC) and foredeep (IG) deposits (Figures 1.5 and 1.8). It is apparent that sediment provenance is becoming both progressively dominated by Precambrian DZ U-Pb and younger Cretaceous DZHe ages up stratigraphic section (Figure 1.5 and 1.9). These DZ U-Pb and short DZHe lag time age trends suggest

basin-wide drainage integration and the gradual inversion of hinterland upper Paleozoic to Cordilleran miogeocline strata.

The progressively shorter DZHe lag time ages in the Turonian to Campanian stratigraphic sections in the Canyon Mountains, Gunnison Plateau, and Hop Creek suggest an increase in exhumation rate post-Cenomanian leading to rapid exhumation in the Campanian (Figure 1.9). The rapid Campanian exhumation is synchronous with (1) the appearance of substantially coarser clastic deposits and compositionally distinct quartzite clasts and quartz-rich sandstones in the proximal-to-distal portion of the foreland basin (i.e., Pass Cyn Member, Sixmile Canyon Fm. Castlegate Fm) [*Lawton*, 1986a; *Lawton*, 1986b; *Horton et al.*, 2004; *Lawton et al.*, 2007] and (2) the pronounced eastward shoreline migration, documented in more "distal" time-equivalent Castlegate Fm. in the Book Cliffs [e.g., *Lawton et al.*, 2007; *Aschoff and Steel*, 2011a; *Aschoff and Steel*, 2011b]. The compositional and stratigraphic changes above and systematic DZ U-Pb and DZHe age changes post-Cenomanian rapid exhumation strongly implicates active hinterland deformation as a modulator for clastic composition and architectural changes in the foreland basin.

Coarse clastic migration and association to deformation

In foreland basins, the temporal association between coarse clastic migration to distal portion of the basin and active thrusting has been subject to significant debate [*Heller et al.*, 1988; *Heller and Paola*, 1989; *Horton et al.*, 2004]. In one model, active

trusting and adjacent flexural subsidence appears to confine coarse-clastic sediment accumulation to the basin margins and is only after thrusting when isostatic compensation allows for sufficient topographic relief and erosion for major sediment dispersal [*Heller et al.*, 1988; *Heller and Paola*, 1989]. In contrast, recent studies have proposed that extensive clastic progradation is coeval with major tectonic pulses in the thrust belt [*Burbank et al.*, 1988; *Kamola and Huntoon*, 1995; *Houston et al.*, 2000; *Aschoff and Steel*, 2011a]. The role of thrusting on basin geometry has been considered by numerical models and indicates rapid thrusting could lead to shallower and narrower under-filled foreland basins under constant erosion and sediment supply [*Flemings and Jordan*, 1989]. However, the underlying assumptions involving magnitude of erosion, sediment supply and transport, and flexural subsidence applied in many of these models cannot be fully tested due to the lack of stratigraphic and hinterland preservation and unidentifiable geodynamic influences.

The transport of Cenomanian gravel facies (Sanpete and lower Dakota Fms.) to "distal" portions of the foredeep is synchronous with rapid exhumation of the PVT and NT hinterland, indicating that SFTB, transport, deformation and uplift were key drivers for the distal extent of gravel facies. This gravel facies extend significantly farther to the east than preceding upper Cedar Fm. strata [e.g., *Yingling and Heller*, 1998] and the subsequent Turonian to Campanian strata, all deposited during continued SFTB eastward migration [e.g., *DeCelles and Coogan*, 2006] and, thus, no direct relationship between coarse sediment dispersal and SFTB proximity can be made.

The controls for ample coarse sediment dispersal in this study are interpreted to be the results of the rapid eastward transfer of both crustal load and limited flexural accommodation space generation (controlled by rate of thrusting) combined with massive sediment output from the SFTB (here inferred from the required hinterland stripping and sediment output to rapidly cool the PVT and NT sheets in that short period). The rapid eastward migration and exhumation of the SFTB likely generated sufficient topographic relief and large sediment output, creating a scenario where sediment input into the foreland basin outpaced the progressive flexural accommodation space generation leading to an overfilled foreland basin. A similar causal relationship is envisioned for the Neocomian Buckhorn Conglomerate in light of its potential relation to the timing of major CRT exhumation, roughly constraints by Barremian-Aptian DZHe ages found in the CRC.

Campanian rapid exhumation (Figure 1.10), was likely driven by duplexes and culminations (e.g., Canyon Range and Santaquin culminations), instead of a single ramp-flat fault accommodating major shortening such as the CRT, PVT or NT as Late Cretaceous structural reconstruction clearly suggest [e.g., *Constenius et al.*, 2003; *DeCelles and Coogan*, 2006]. The lack of a coarse clastic migration in magnitude similar to the Buckhorn Clg. or Dakota Fm. in the Campanian could be associated to discrepancies in magnitude of shortening and/or style of deformation. Major coarse clastic dispersal in the foreland basin occurs only in periods were major shortening was been accommodated in the SFTB (e.g., CRT, PVT, NT) with the exception of minor clastic incursions in the Campanian (Figure 1.9).

CONCLUSIONS

The ZHe thermochronometric ages on bedrock strata in the Canyon Range and CNS constraints the onset and peak exhumation on both the PVT and NT in the Cenomanian (~95 Ma). This is supported by near zero DZHe lag time ages in the CRC and Dakota Fm of Cenomanian age.

The DZ U-Pb and DZHe ages from the CRC provide significant constraints on the unroofing history of the PVT and Canyon Range culmination. Two unroofing episodes are proposed: the first is preserved in the Cow Cyn Member, which contains DZHe ages as young as Cenomanian, with a distinctive peak at ~125 Ma, and only four Precambrian DZ age components indicating CRT Precambrian-Cambrian strata fast cooling. The second unroofing episode is marked in the Wild Horse Canyon Member by a sudden increase in Appalachian pluton DZ U-Pb ages, common in upper Paleozoic strata, and significant older DZHe ages. Up-stratigraphic section DZHe ages become gradually dominated by Mesozoic DZHe ages again (Jurassic-Cretaceous DZHe ages) and exclusively Precambrian DZ-U-Pb components recording the growth and unroofing of the Canyon Range culmination.

Indianola Group foredeep strata, in contrast to the CRC wedgetop deposits, records input predominantly from upper Paleozoic and Mesozoic (Late Neoproterozoic DZ ages and Paleozoic DZHe ages) strata in the Sanpete Fm. to Precambrian and lower Paleozoic strata up-stratigraphy in the Sixmile Canyon Fm. The consistent gradual increase in Precambrian DZ U-Pb ages up-stratigraphic-section suggest wholesale SFTB

hinterland derivation from the Cenomanian to the Campanian. Short DZHe lag time ages in the Sixmile Canyon Fm. as well as the Pass Cyn Member indicate rapid Campanian exhumational cooling. The significant reduction in Paleozoic DZ U-Pb ages and increase in Precambrian DZ U-Pb ages requires significant derivation from Precambrian-Paleozoic SFTB strata coeval with rapid Campanian exhumation.

DZ U-Pb and DZHe maximum depositional ages from the IG and CRC units helps confirm lithostratigraphic correlations by establishing and validating the CRC and IG stratigraphic fauna and geochronometric framework, crucial to reconstruct the timing of SFTB deformation [e.g., *Jefferson*, 1982; *Fouch et al.*, 1983; *Lawton*, 1985; *Lawton et al.*, 2007].

The coarse clastic sediment dispersal in the Dakota Fm. is synchronous with major shortening in the PVT and NT of the SFTB (~95 Ma), which agrees with models that suggest active trusting in the hinterland controls for major coarse sediment dispersal in a foreland basin setting [*Burbank et al.*, 1988; *Kamola and Huntoon*, 1995; *Houston et al.*, 2000; *Horton et al.*, 2004]. The DZHe depositional lag time constraints on the timing of deformation and previous kinematic reconstructions suggest that the extent of coarse clastic sediment migration at a magnitude comparable to the Dakota Fm. and Buckhorn Clg. is potentially link to the magnitude of shortening and style (?) of deformation driving fast exhumation (ramp transport vs duplexes and culmination related exhumation).

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FIGURES

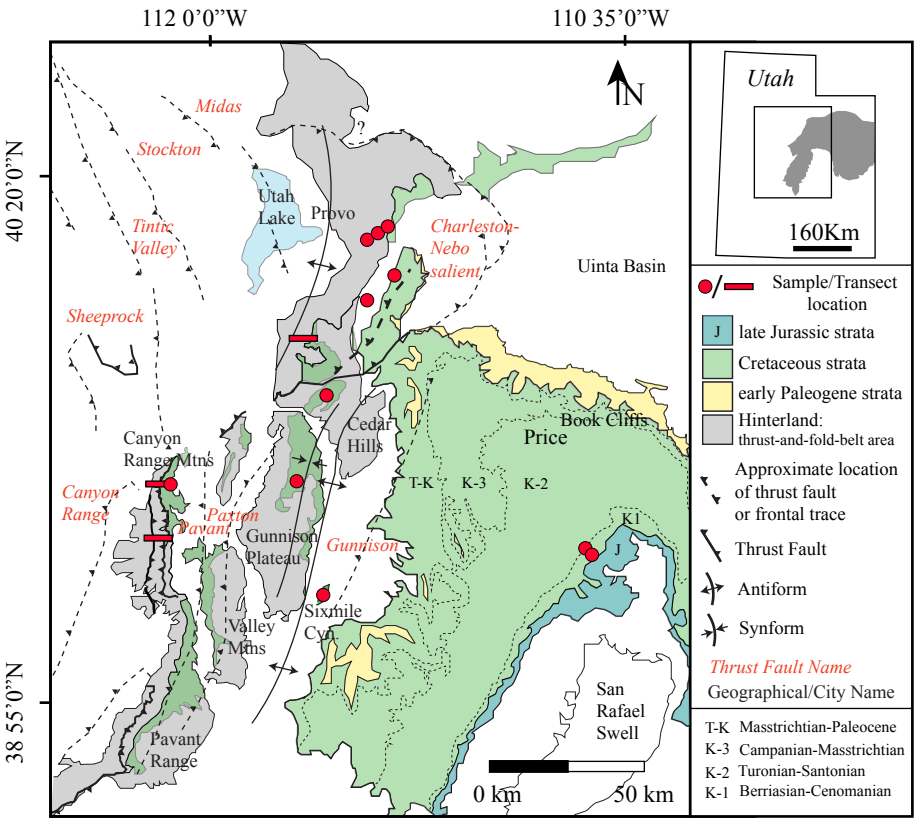


Figure 1.1. Regional index map showing the present-day distribution of Sevier contractional faults (names in red) and exposed early Paleogene (yellow), Cretaceous (green) and late Jurassic (light blue) strata in Central Utah. The sample locations are displayed as red dots and rectangles.

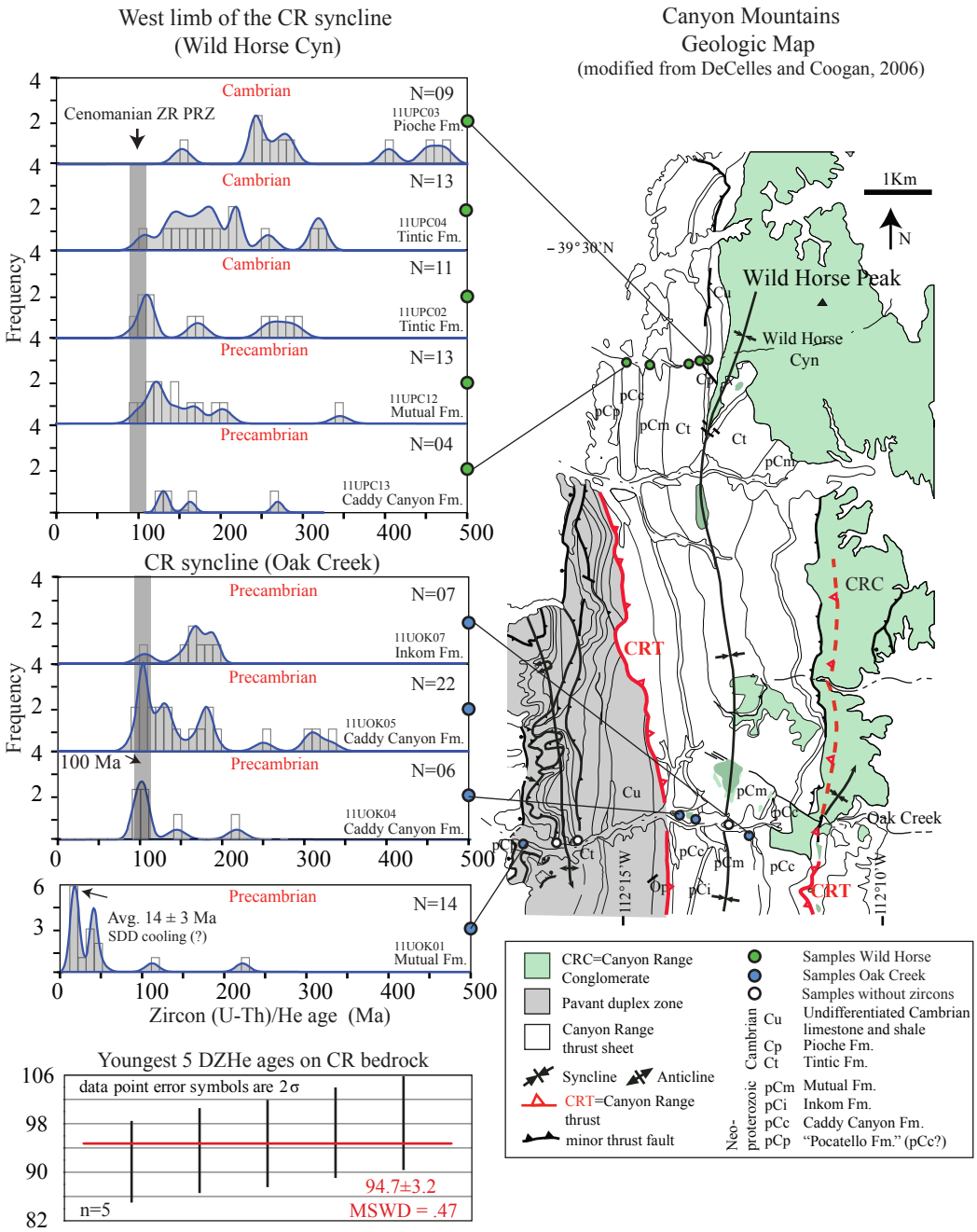


Figure 1.2. Sample location and ZHe ages from Precambrian and Cambrian units in the CRT sheet (Canyon Mountains). The Canyon Mountains structural map was modified from DeCelles and Coogan [2006] to show sample location (green, blue, and red dots) and their relationship to key Sevier structural and stratigraphic elements such as the CRT, Pavant duplexes and Cretaceous syn-orogenic strata (CRC). ZHe ages are displayed as KDEs and histograms. Only ZHe ages with alpha dosages lower than 10^{18} (α/g) were plotted (see figure 6). The plot in the bottom left shows the weighted average and 2σ error of the youngest ZHe ages that overlap at 2σ of the youngest age found in CRT sheet strata after alpha dosage evaluation.

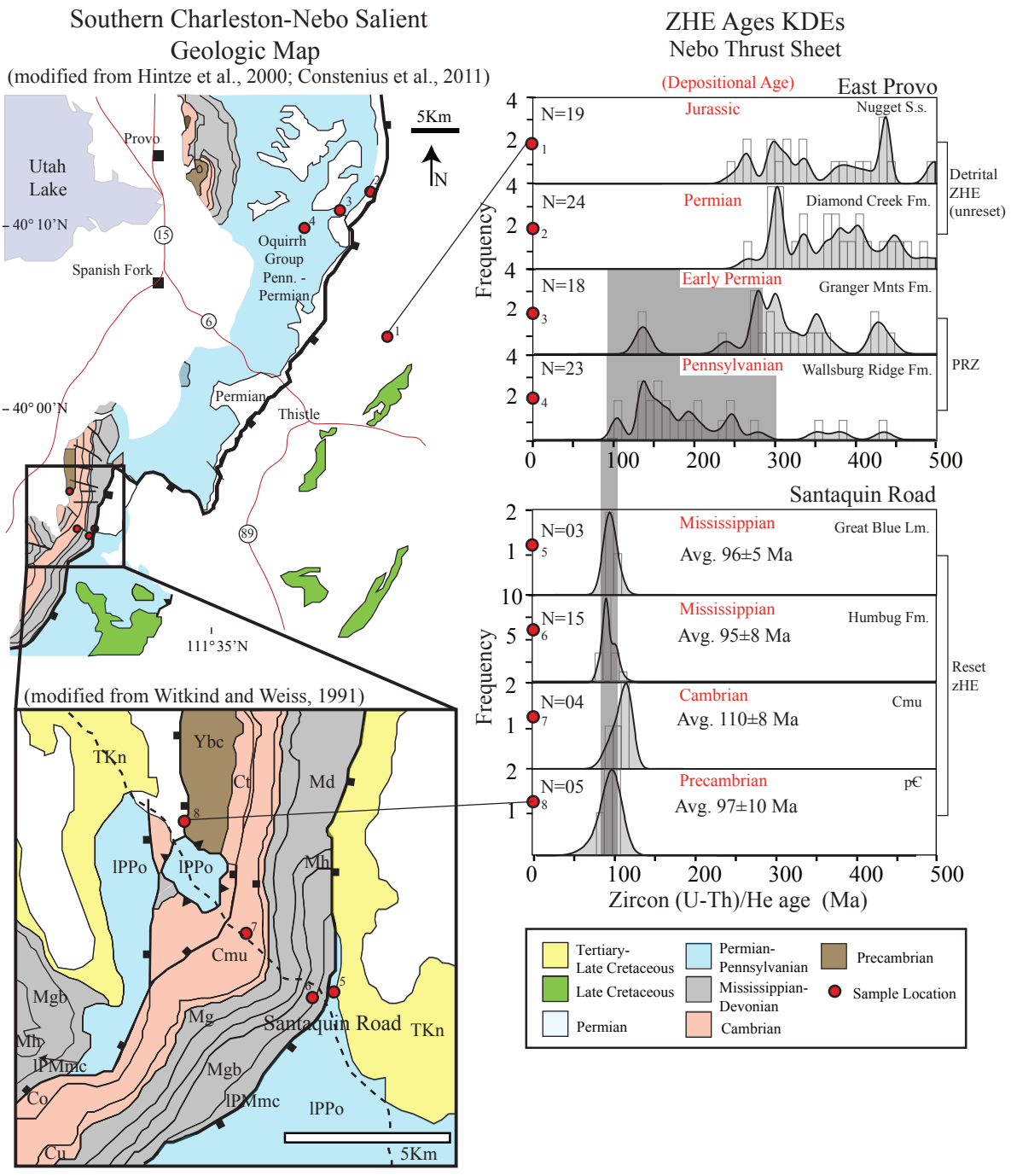
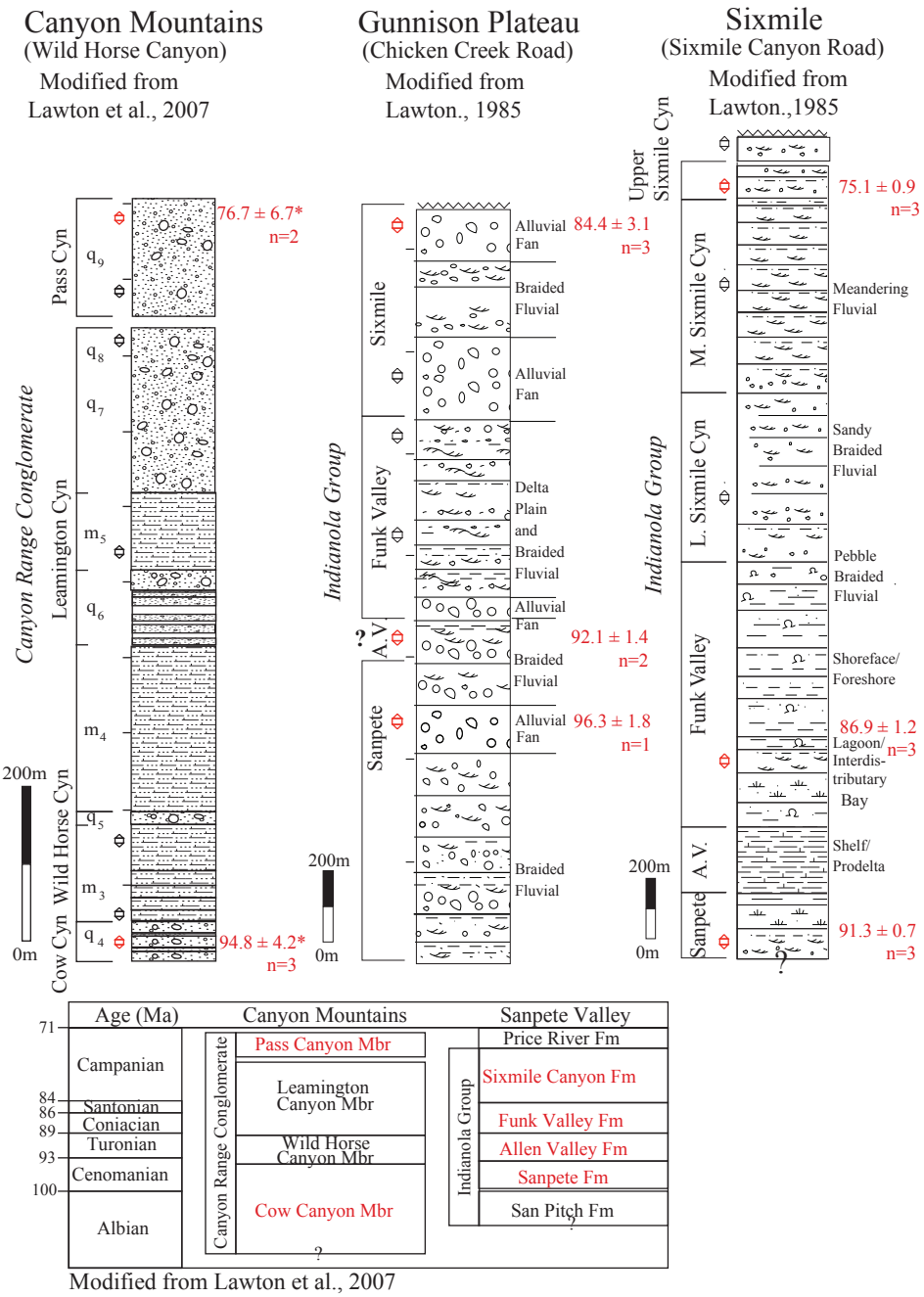


Figure 1.3. Sample location and ZHe ages from Precambrian through Jurassic strata in the Charleston-Nebo Salient. This simplified geologic map illustrates the current structural and stratigraphic configuration of the Charleston-Nebo salient southern section and sample location (red dots). Normal faults are post Sevier deformation. Maps were modified from Witkind and Weiss (1991), Hintze et al., [2000] and Constenius et al., [2011]. Notice Precambrian to Carboniferous strata yield unimodal DZHe age distribution with peaks in the Cenomanian.



Modified from Lawton et al., 2007

Figure 1.4. The figure shows the approximate stratigraphic location of the samples collected in the Canyon Mountains, Gunnison Plateau, and Sixmile Canyon. The stratigraphic sections are modified from Lawton [1985] and Lawton et al., [2007]. The interpreted chrono-stratigraphic correlations between the CRC and IG were modified from Lawton et al., [2007] and according to the zircon U-Pb and (U-Th)/He geochronometric constraints (shown in red) provided in this study. See figure 5 and Appendix A: Table 2a-3a for ages.

a

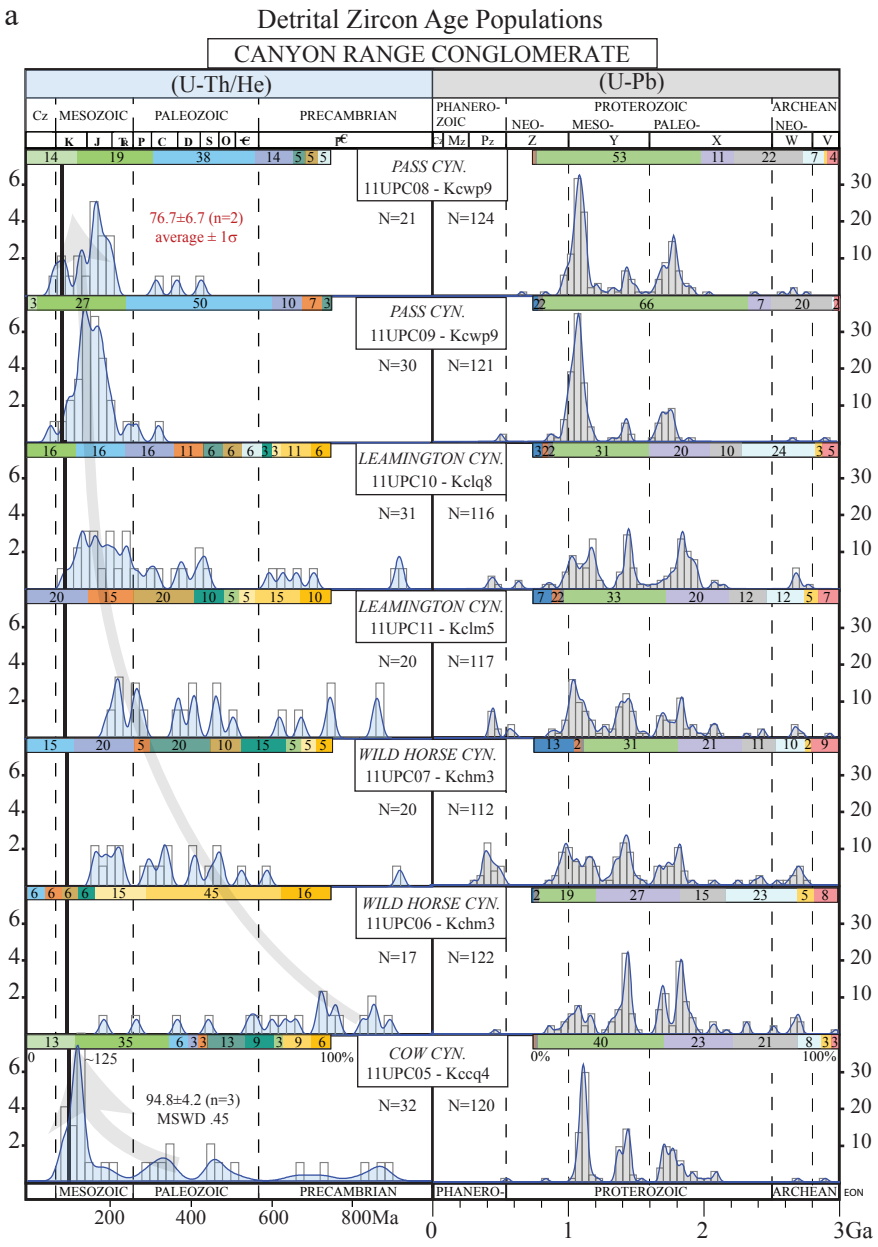

Detrital Zircon Age Populations
CANYON RANGE CONGLOMERATE
(U-Th/He)
(U-Pb)
PASS CYN.
11UPC08 - Kcwp9
N=21
N=124
76.7±6.7 (n=2)
average ± 1σ
PASS CYN.
11UPC09 - Kcwp9
N=30
N=121
LEAMINGTON CYN.
11UPC10 - Kclq8
N=31
N=116
LEAMINGTON CYN.
11UPC11 - Kclm5
N=20
N=117
WILD HORSE CYN.
11UPC07 - Kchm3
N=20
N=112
WILD HORSE CYN.
11UPC06 - Kchm3
N=17
N=122
COW CYN.
11UPC05 - Kccq4
N=32
N=120
94.8±4.2 (n=3)
MSWD .45
MESOZOIC
PALEOZOIC
PRECAMBRIAN
PHANERO-ZOIC
PROTEROZOIC
ARCHEAN
200
400
600
800Ma
0
1
2
3Ga

Figure 1.5a

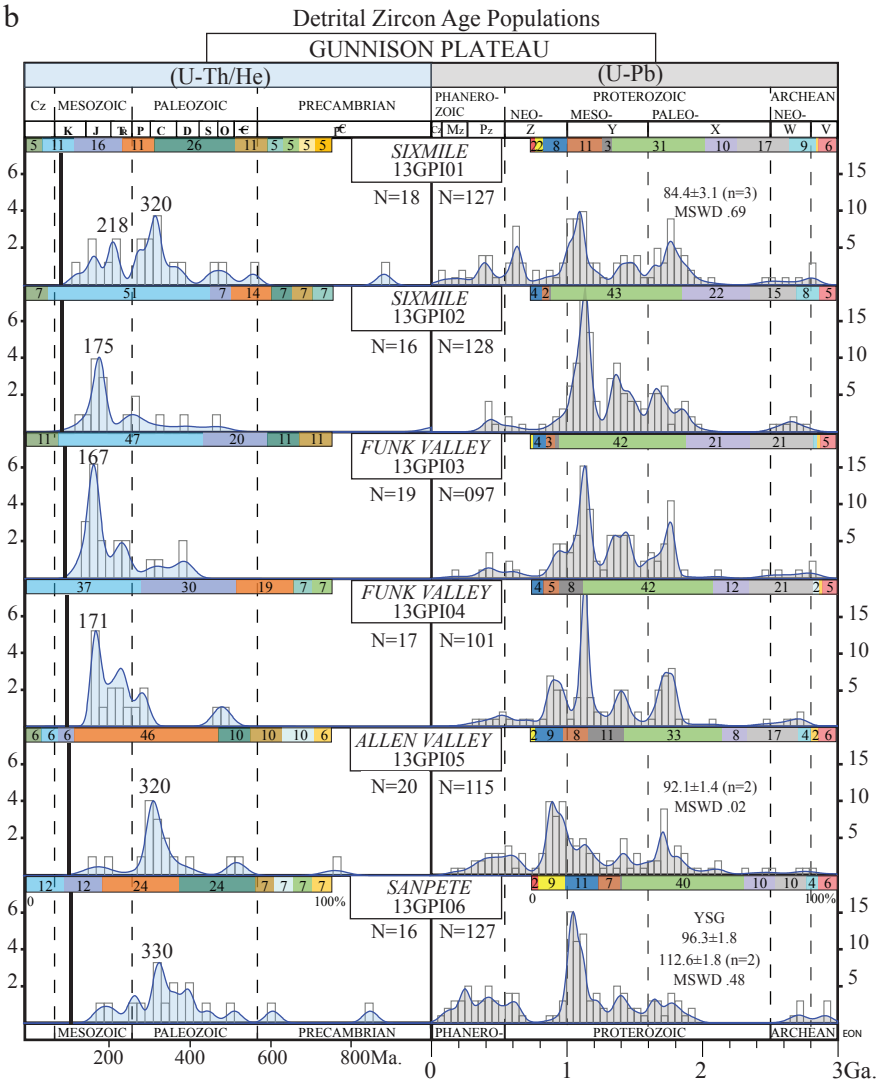

b
Detrital Zircon Age Populations
GUNNISON PLATEAU
(U-Th/He)
(U-Pb)
SIXMILE
13GPI01
N=18
N=127
84.4±3.1 (n=3)
MSWD .69
SIXMILE
13GPI02
N=16
N=128
FUNK VALLEY
13GPI03
N=19
N=097
FUNK VALLEY
13GPI04
N=17
N=101
ALLEN VALLEY
13GPI05
N=20
N=115
92.1±1.4 (n=2)
MSWD .02
SANPETE
13GPI06
N=16
N=127
YSG
96.3±1.8
112.6±1.8 (n=2)
MSWD .48
MESOZOIC
PALEOZOIC
PRECAMBRIAN
PROTEROZOIC
ARCHEAN
200
400
600
800Ma.
0
1
2
3Ga.

Figure 1.5b

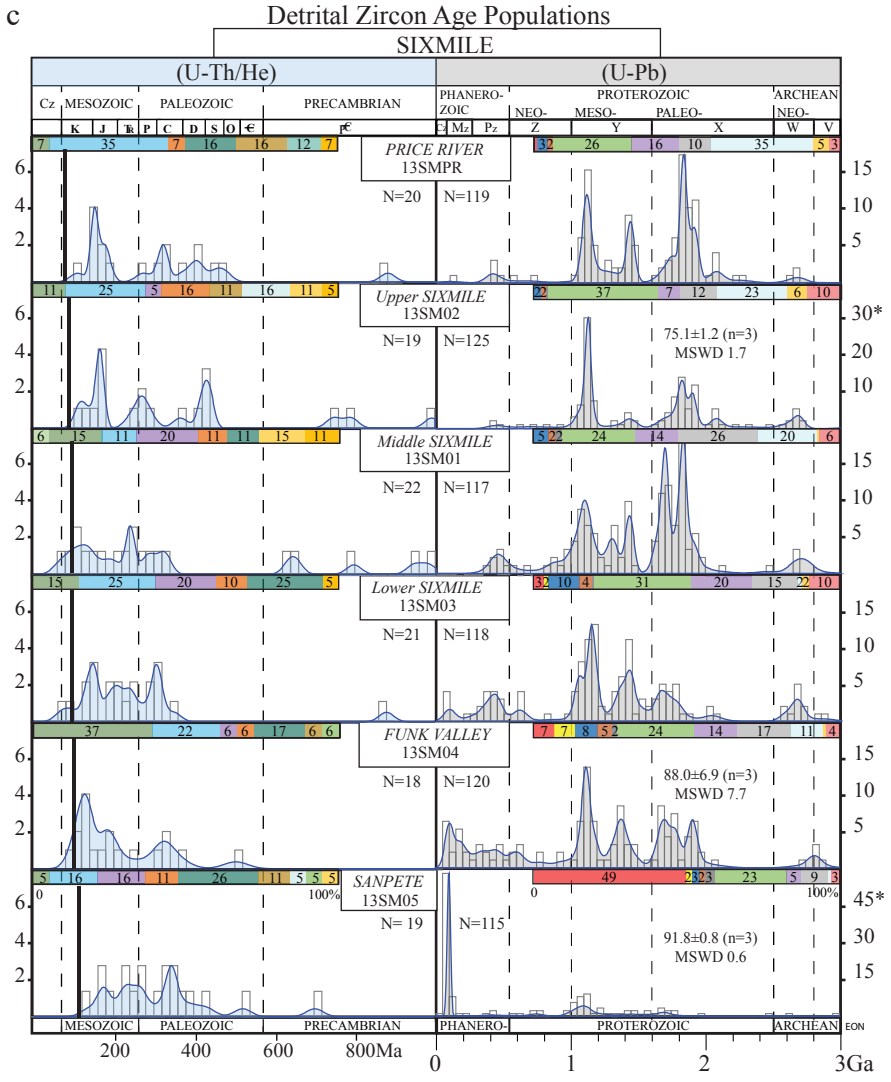

c
Detrital Zircon Age Populations
SIXMILE
(U-Th/He)
(U-Pb)
PRICE RIVER
13SMPR
N=20
N=119
Upper SIXMILE
13SM02
N=19
N=125
75.1±1.2 (n=3)
MSWD 1.7
Middle SIXMILE
13SM01
N=22
N=117
Lower SIXMILE
13SM03
N=21
N=118
FUNK VALLEY
13SM04
N=18
N=120
88.0±6.9 (n=3)
MSWD 7.7
SANPETE
13SM05
N= 19
N=115
91.8±0.8 (n=3)
MSWD 0.6
MESOZOIC
PALEOZOIC
PRECAMBRIAN
PHANERO-ZOIC
PROTEROZOIC
ARCHEAN
200
400
600
800Ma
0
1
2
3Ga

Figure 1.5c

d

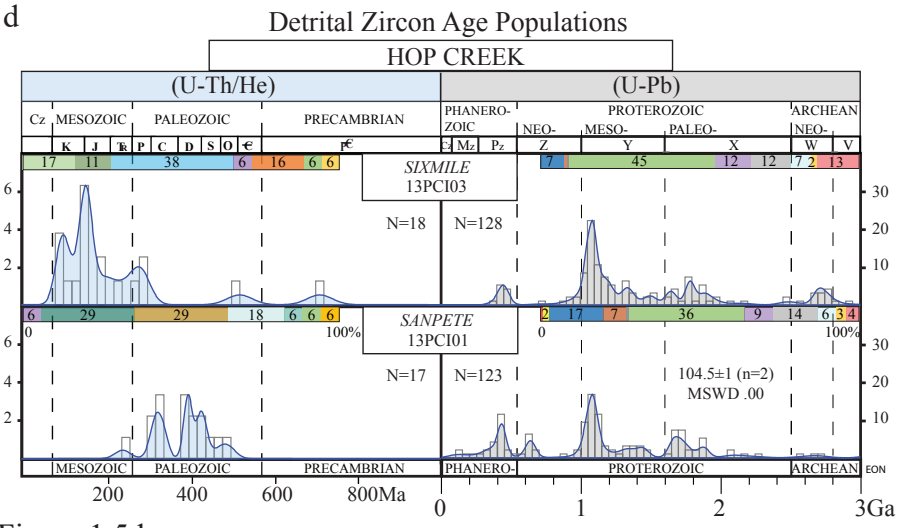

Detrital Zircon Age Populations
HOP CREEK
(U-Th/He)
(U-Pb)
Cz
MESOZOIC
PALEOZOIC
PRECAMBRIAN
PHANERO-ZOIC
PROTEROZOIC
ARCHEAN
NEO-
MESO-
PALEO-
K
J
P
C
D
S
O
Mz
Pz
Z
Y
X
W
V
17
11
38
6
16
6
6
7
45
12
12
7
2
13
SIXMILE
13PCI03
N=18
N=128
6
29
29
18
6
6
6
2
17
7
36
9
14
6
3
4
0
100%
SANPETE
13PCI01
N=17
N=123
104.5±1 (n=2)
MSWD .00
MESOZOIC
PALEOZOIC
PRECAMBRIAN
PHANERO-
PROTEROZOIC
ARCHEAN
EON
200
400
600
800Ma
0
1
2
3Ga

Figure 1.5d

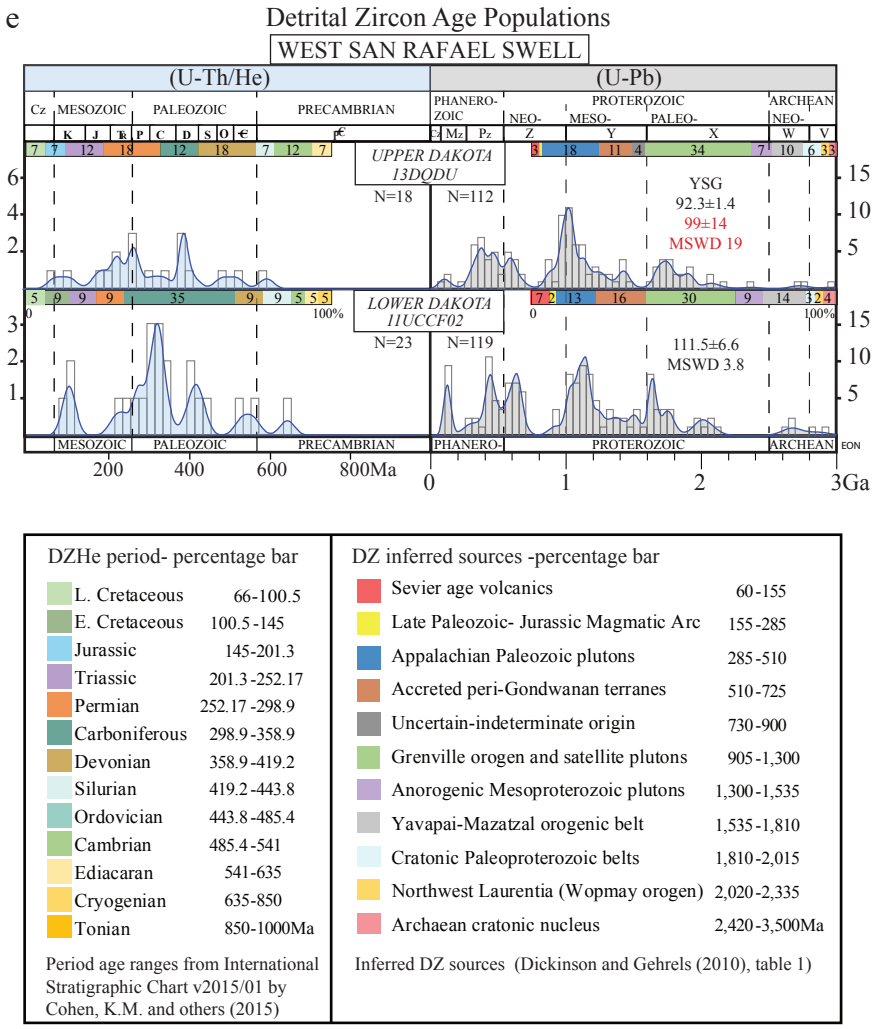


Figure 1.5e. DZHe (blue) and DZ (grey) age distribution exhibited as histograms, KDEs and percent of North America magmatic events (U-Pb) and geologic periods (ZHe). The histogram bin width for DZ and DZHe ages is 50 and 20 Ma respectively. Values in the Y axis are the total count of ages in that bin (age) range and was preserved constant per transect when possible for easier comparison. The KDEs bandwidth is 20 and 10 for DZ and DZHe ages respectively. N in the DZHe section does not included volcanic fast cooling zircons. The bar on the upper part of the DZ KDEs box shows the percentage of zircon grains that fall within the age ranges of North America magmatic events as stated/inferred by Dickinson and Gehrels [2010]-table 1. The bar located on the opposite end displayed the percentage of DZHe ages that fall within Cretaceous to the Tonian geologic periods. Geologic Periods age ranges are based on International Stratigraphic Chart v2015/01 by Cohen, K.M. et al., [2015]. The black line illustrates depositional age. The maximum depositional age is displayed as weighted average ± 2σ with its respective MSWD (Mean Square Weighted Deviation) and n number. Single U-Pb age are shown as YSG (youngest single age) in the DZ column. This figure is divided in the following foreland stratigraphic transects: (a) Canyon Mountains; Canyon Range Conglomerates, (b) Gunnison Plateau; Chicken Creek; Indianola, (c) Sixmile Canyon; Indianola, (d) Hop Creek-Indianola, (e) west San Rafael Swell; Dakota Formation.

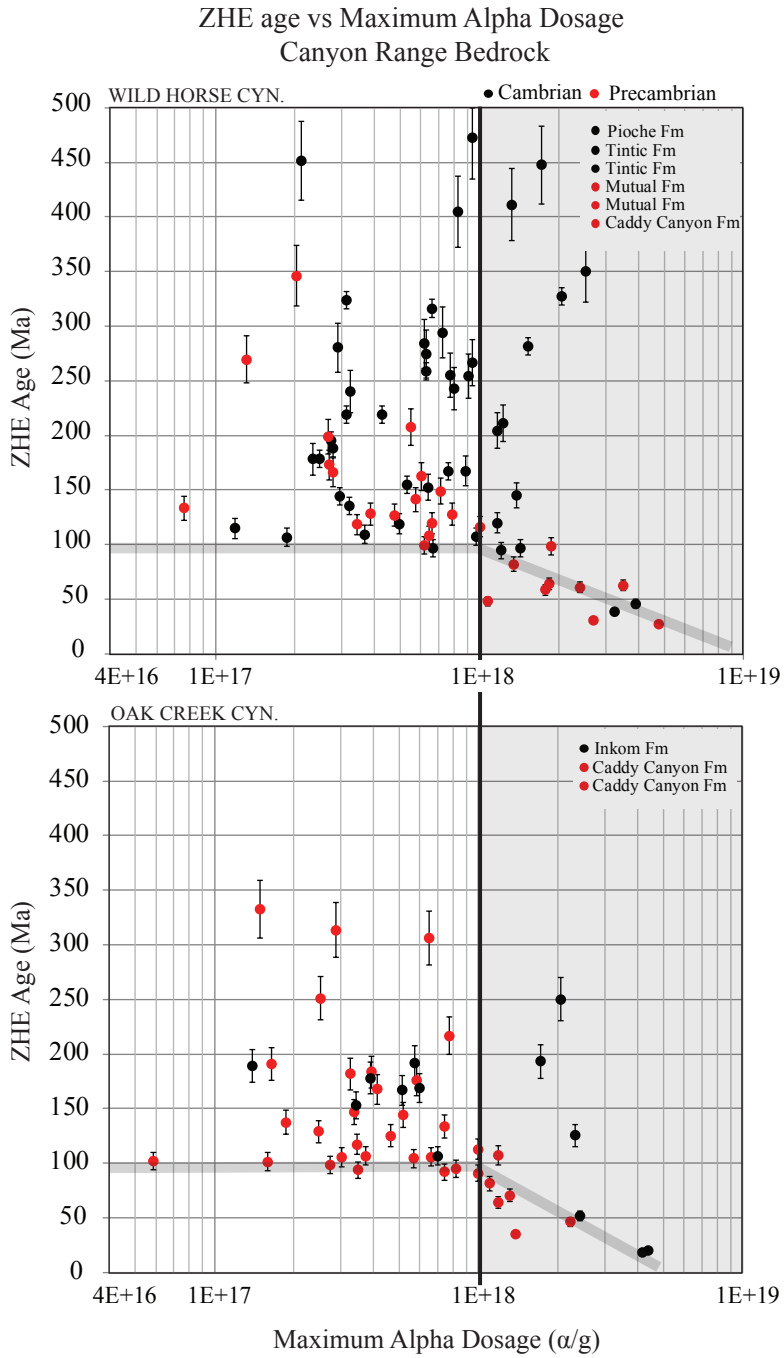


Figure 1.6. These plots show ZHe ages (Ma) from bedrock samples in the CRT plotted against maximum alpha dosage (α/g) values. An observable reduction in ZHe ages at alpha dosages greater than 10^{18} (α/g) suggest a possible dependency to alpha damage. ZHe ages are from Cambrian (black dots) to Precambrian (red dots) units in the Canyon Mountains, specifically the Wild Horse Canyon and the Oak Creek Canyon (see also fig. 2). A maximum alpha damage was calculated based on U-Pb ages (see discussion for more details).

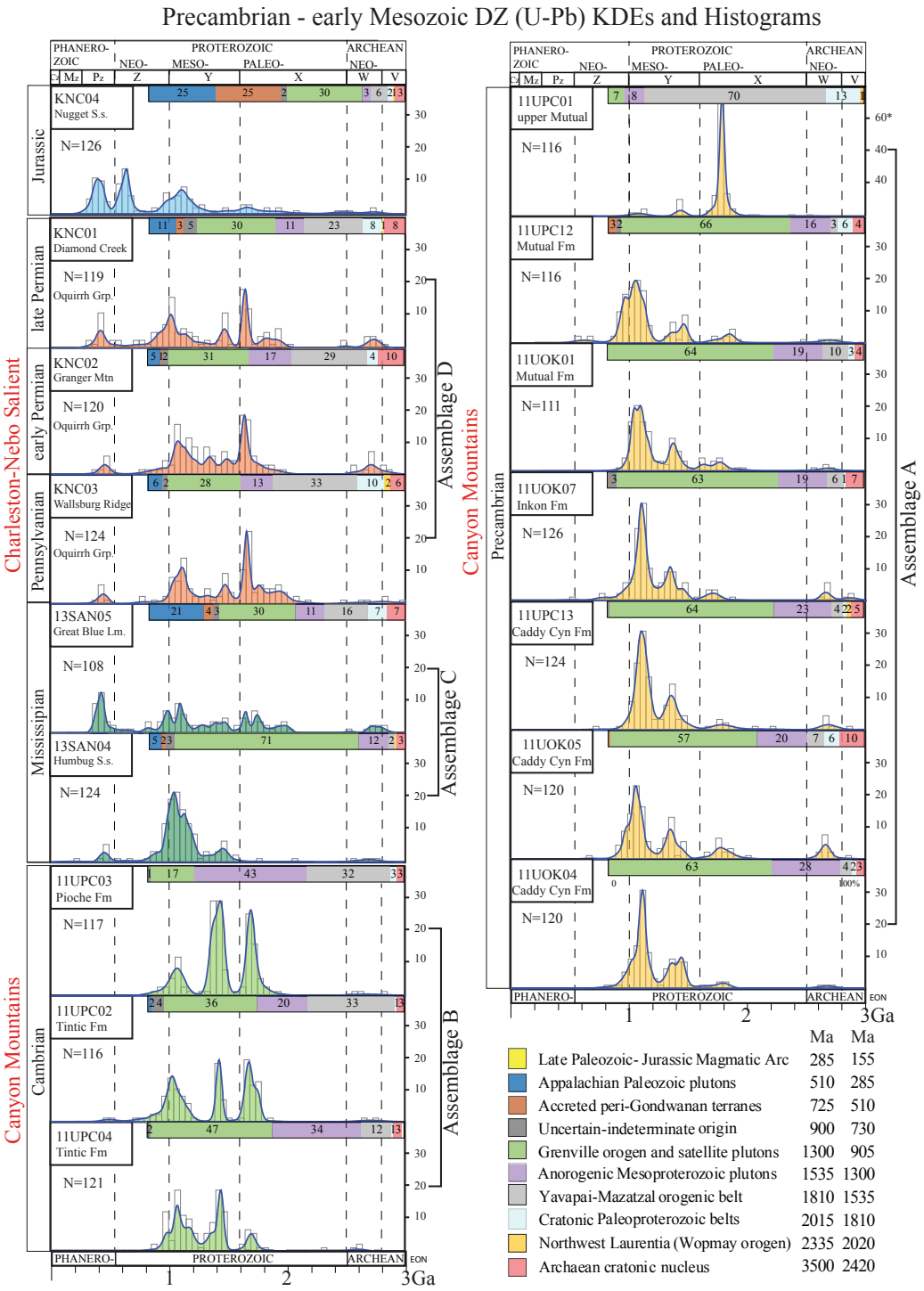


Figure 1.7. Precambrian to Jurassic DZ age distributions displayed as histograms and KDEs. The brackets on the right of the DZ age populations are the proposed source intervals. The histogram bin width for DZ is 50 Ma and the KDEs bandwidth is 20.

Multi-sample comparison of Precambrian to Late Cretaceous detrital age distributions

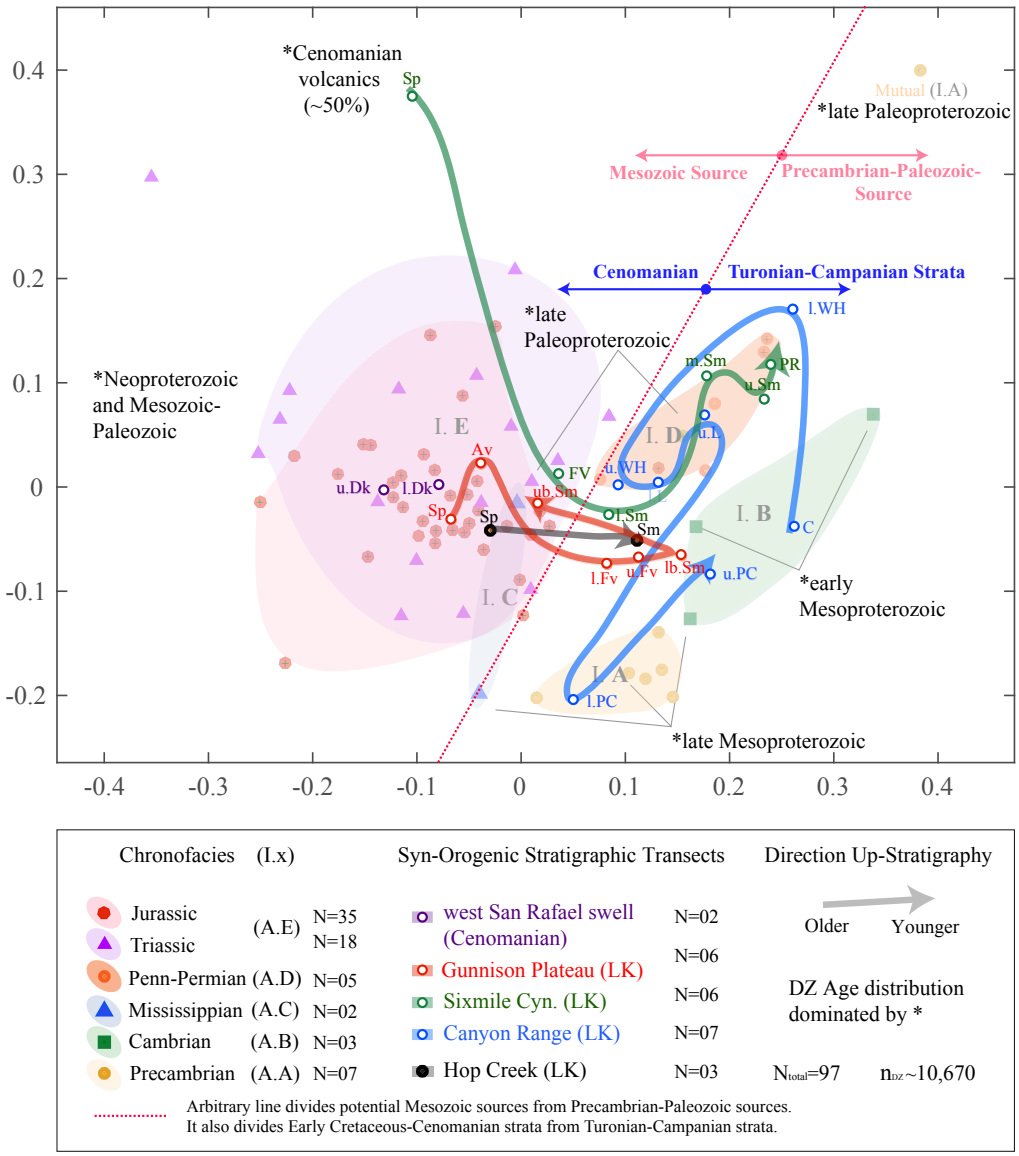


Figure 1.8. Multi-sample comparison of Precambrian to Late Cretaceous detrital zircon U-Pb ages. Enclosed in ellipsoids are the proposed provenance assemblages based on bedrock stratigraphic ages and DZ U-Pb sample similarity. The arrows (curve lines with an arrowhead) show the direction up-stratigraphy in MDS Euclidian space. The plot is additionally divided between Mesozoic and Precambrian-Paleozoic sources by an arbitrary red dotted line that separates Mesozoic samples from Precambrian-Paleozoic samples. The same line also separates Cenomanian samples from Turonian-Campanian samples.

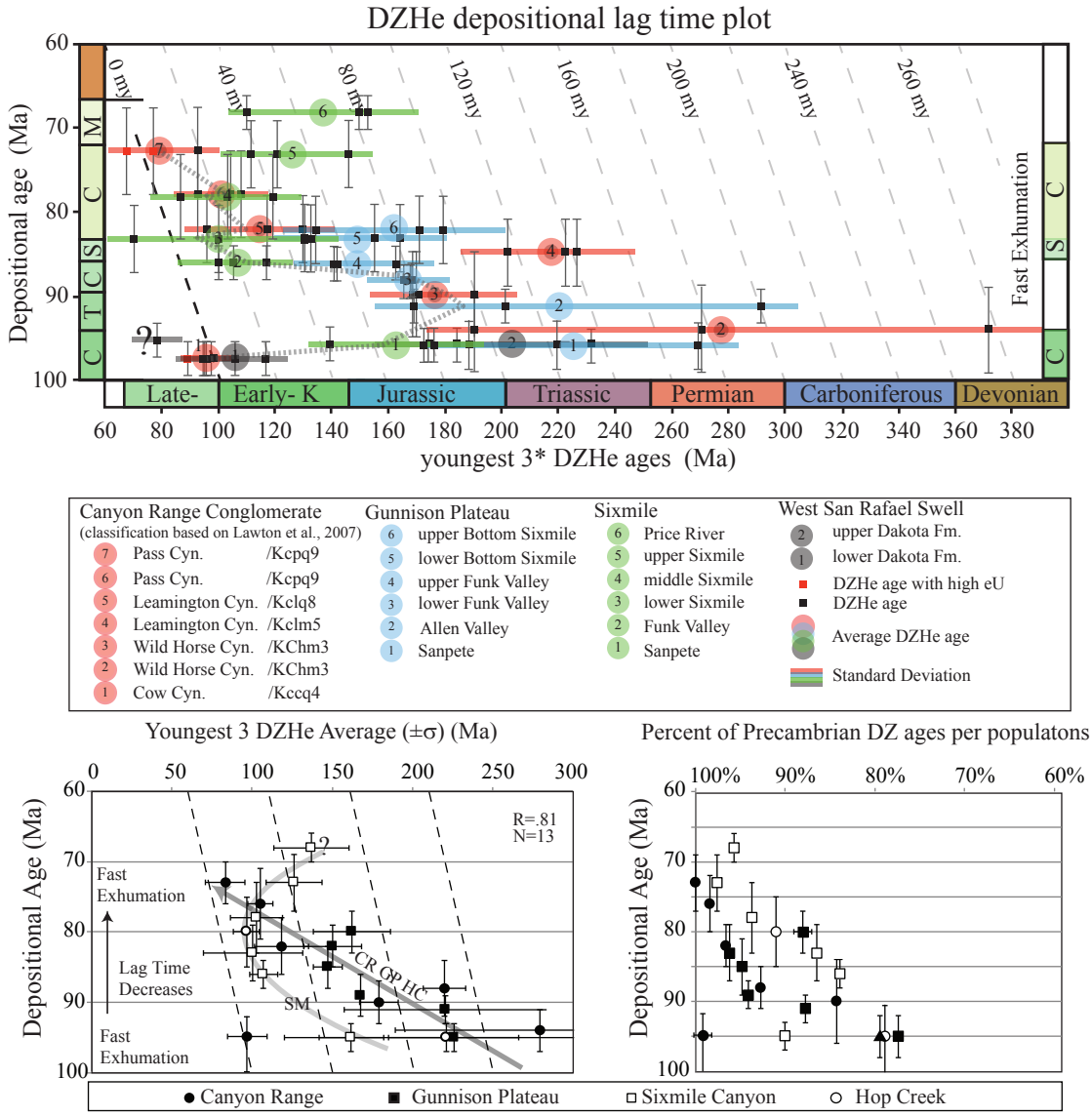


Figure 1.9. DZHe lag time plot. This plot compiles the youngest three DZHe ages (x-axis) found on each sample and placed them against their corresponding depositional age (y-axis). Depositional age uncertainties are based on Lawton et al., [2007] figure 7. The DZHe populations belong to different Indianola and Canyon Range syn-orogenic strata. The color indicates transect location. The 1:1 slope dashed lines represent DZHe depositional lag times (lag time = DZHe age- depositional age). The two plots below show (1) the average of the youngest 3 DZHe ages found on each DZHe population and (2) percent of Precambrian DZ ages per population.

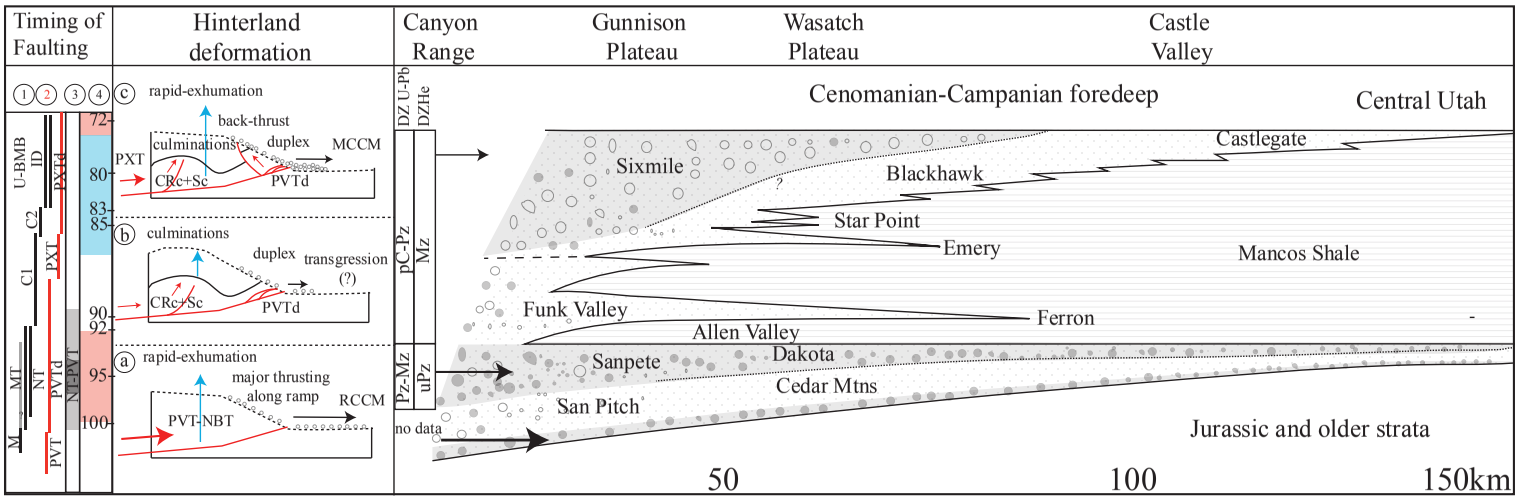


Figure 1.10. Proposed chronological relationship between Sevier foreland architecture (modified from Lawton [1986]), hinterland exhumation and deformational styles. The approximate coarse clastic sediment spread is shown in the foreland in gray. The diagram is divided in three sections: timing of faulting, hinterland deformation and foreland basin architecture. The timing of faulting shows four columns (1-4): (1) In black lines from left to right, the Midas (M), Nebo (NT), Mount Timpanogos (MT), Charleston 1 (C1), Charleston 2 (C2) and Uinta-BMB thrusts, and internal back-thrusting (ID) ages [Constenius et al., 2003; DeCelles 2004; and Guenther et al., 2015]. (2) In red lines from left to right; Pavant thrust (PVT), Pavant duplexes (PVTd), Paxton thrust (PXT) and Paxton duplexes (PXTd) ages [DeCelles 2004]. (3) Timing of exhumation based on zircon (U-Th)/He ages on Precambrian to Carboniferous strata in the NT and Precambrian-Cambrian strata in the PVT. (4) This column shows stratigraphic intervals with zero depositional lag time in pink and abrupt reduction on depositional lag time in blue (depositional ages are scaled to stratigraphic thickness). The hinterland deformation section shows the prevalent deformational style (a-c) and magnitude of exhumation (blue arrow), displacement (red arrow) and coarse clastic extend (black arrow). In this conceptual model (a) the rapid coarse clastic migration (RCCM) is associated with fast hinterland exhumation along a major fault ramp such as the PVT-NT. This is followed by (b) a period of orogenic built up and culminations where exhumation and sediment output are inadequate to enable coarse sediments migration out of the wedge-top and most proximal foredeep. Although the last stage (c) records significant exhumation similar in magnitude to the Cenomanian, we believe the Campanian coarse clastic wedge was partially restricted (MCCM) largely due to the limited eastward migration of the thrust load (compared to the CRT and PVT), different structural style governing Campanian SFTB deformation and potentially larger accommodation space generation in the wedge-top and foredeep. Dominant DZ-DZHe ages are shown in two columns on the left side of the foreland architecture diagram indicating a major foredeep provenance change in the Turonian.

Chapter Two: (U-Th)/He And U-Pb Double Dating Constraints On The Interplay Between Thrust Deformation And Basin Architecture, Sevier Foreland Basin, Utah

ABSTRACT

The Cordilleran foreland basin strata exposed in the Book Cliffs, Utah-Colorado, have served to explore the dynamic linkages between thrust belt deformation and foreland basin evolution based largely on sequence stratigraphy, strata architecture, and sediment provenance evolution. However, these methods are often inconclusive when relating hinterland deformation to foreland basin architecture due to discrepancies in age resolution between thrust belt and basin fill evolution and uneven along-strike unroofing histories. New detrital geo-thermochronometric data from Upper Cretaceous proximal to distal foreland basin strata in the Book Cliffs (Utah-Colorado) and vicinity deliver new insights into sediment origin and dispersal in relation to episodes of hinterland exhumation and location. Detrital zircon (DZ) U-Pb and (U-Th)/He (He) ages indicate that Book Cliffs foredeep sedimentation was largely delivered by two major transverse sources: (1) Precambrian and lower Paleozoic strata from the central portion of the Sevier thrust belt (Canyon Range and Pavant thrust sheets) containing mostly Cordilleran cooling ages, and (2) Permian-Jurassic and syn-orogenic Cretaceous strata exhumed by folding and back-thrusting in frontal CNS horses characterized by older Paleozoic cooling ages. A major increase in Sierran magmatic-arc, Yavapai-Mazatzal DZ U-Pb and Paleozoic DZHe ages down-depositional-dip indicates increasing influence of axial sediment delivery from southern magmatic-arc and Mogollon highland sources to the marine portions of the foreland basin. Both transverse and axial transport systems co-evolved uninterrupted with the eastward propagation of Late Cretaceous SFTB deformation and do not mimic episodes of transverse to axial fluvial

drainage re-organization documented in southern Utah time-equivalent strata. The DZHe depositional lag time estimates (excluding first-cycle volcanics) employed in a high chronostratigraphic resolution reveal three episodes of hinterland exhumation, including one in the Cenomanian and two others in the Campanian. The Campanian DZHe lag time framework, provenance, and sediment dispersal patterns strongly suggest that discrepancies in sediment dispersal style and progradation rates recorded in foreland basin strata can in fact be explained by episodes of major hinterland exhumation. The DZ geo-thermochronometric data is in agreement with conceptual models tying pulses of major sediment dispersion to active thrusting.

Keywords: Book Cliffs, Cordilleran Foreland Basin, Detrital Zircon (U-Th)/(He-Pb) double dating, Clastic wedge progradation

INTRODUCTION

Foreland basin evolution models based on process-oriented litho- and sequence-stratigraphic concepts commonly lack a direct association to thrust belt deformation. This is in part due to discrepancies in resolution of resolving timing of hinterland deformation and basin fill evolution. Moreover, external forcing factors such as tectonics, sediment supply, flexural subsidence, eustasy and climate as well as autogenic processes such as lateral accretion and avulsion in fluvial systems can generate identical stacking patterns and stratal architecture, and thus the mechanism modulating foreland basin architecture and evolution are not easily resolved [e.g., *Flemings and Jordan*, 1989; *Dickinson*, 1996; *Aschoff and Steel*, 2011a]. As a consequence, the degree of impact of hinterland tectonics in foreland stratigraphic architecture has been debated for decades and the understanding of these forcing factors and their compensatory relationships still remains poorly understood [e.g., *Burbank et al.*, 1988; *Heller et*

al., 1988; *Heller and Paola*, 1989; *Kamola and Huntoon*, 1995; *Houston et al.*, 2000; *DeCelles*, 2004; *Horton et al.*, 2004; *Aschoff and Steel*, 2011a]. Competing hypotheses have been postulated for the feedbacks and drivers involved between tectonism within the fold-and-thrust belt and clastic progradation in the foreland basin. *Heller et al.* [1988] proposed a two-phase model in which coarse-clastic sediment accumulation synchronous with active thrusting is restricted to the proximal basin foredeep due significant flexural subsidence. This is followed by minor thrust activity, major isostatic compensation and long-distance progradation of coarse sediment. This second phase is considered to be an interval of enhanced sediment dispersal during tectonic "quiescence" associated with a slowdown in flexural subsidence and accommodation space growth [*Heller et al.*, 1988; *Aschoff and Steel*, 2011a]. In contrast, detailed stratigraphic studies in the Cordilleran foreland basin in central Utah have ascribed parasequence cyclicity of stacking patterns, abrupt changes in shoreline trajectory, and stratal architecture directly to flexural pulses driven by synchronous deformation and thrust belt advance [*Burbank et al.*, 1988; *Kamola and Huntoon*, 1995; *Houston et al.*, 2000; *Aschoff and Steel*, 2011a]. However, the thrust-belt-to-foreland causal relationship in these models weighs heavily on the assumption of constant sediment input. This assumption is difficult to corroborate but of fundamental importance for understanding the evolution of stacking patterns and the role of tectonism in foreland architecture [*Wehr*, 1993; *Kamola and Huntoon*, 1995; *Leva López et al.*, 2014]. Petrographic provenance studies combined with stratigraphic and structural evidence for syn-depositional deformation in the proximal coarse-clastic basin fill have documented the temporal and causal interplay between tectonics and basin processes by associating major changes in sediment composition to deformation in the hinterland [*Jefferson*, 1982; *Lawton*, 1986; *Horton et al.*, 2004]. Nevertheless, the linkage to more distal, non-conglomeritic facies of

the foreland basin remains enigmatic. In part, the complications stems from the lack of temporal constraints in fluvial and alluvial deposits and the fact that distal parts of the basin, particularly fluvial facies, have shown to have been heavily influenced by axial sediment transport [e.g., *Lawton et al.*, 2003; *Jinnah et al.*, 2009; *Lawton et al.*, 2014; *Szwarc et al.*, 2015], adding spatial intricacy to sediment input and dispersal patterns. Hence, there is little unequivocal and direct evidence that relates phases of sediment generation, accumulation, and pronounced sediment influx to pulses in thrust activity. This study employs detrital zircon (DZ) U-Pb and (U-Th)/He (He) double-dating on Late Cretaceous foredeep strata in the Book Cliffs portion of the Cordilleran (Sevier) foreland basin to establish a clearer temporal and causal link between thrusting and foreland basin architecture. The new high-density geo-thermochronometric data employed at the one-million year stratigraphic resolution help (1) improve provenance (2) delineate the extent of transverse and axial transport and (3) directly evaluate the temporal linkage between hinterland deformation and established clastic wedge composition, migration rates, and styles.

GEOLOGICAL FRAMEWORK

Tectonic Framework

The Late Jurassic to Eocene evolution of the North America Cordilleran foreland basin is largely associated with the development and eastward migration of contractile deformation and orogeny in western North America [*Armstrong*, 1968; *Currie*, 1998; *Dickinson*, 2004]. The Cordilleran orogeny formed in response to subduction of the Farallon oceanic plate beneath the North America resulting in the eastward propagation of contractile deformation for ~1000 kilometers in >100 Myr [*DeCelles*, 2004]. The Cordilleran foreland basin developed in

accordance with the Cordilleran (Sevier) deformational front evolution and was later partitioned by middle to late Campanian basement-involved deformation known as the Laramide uplifts [*Dickinson et al.*, 1988; *Lawton*, 2008; *Lawton and Bradford*, 2011]. The early stages of Laramide deformation are concomitant with Sevier deformation and are believed to mark the beginning of flat-slab subduction of the Farallon oceanic plate under the North America plate [*Dickinson and Snyder*, 1978; *Miller et al.*, 1992; *Saleeby*, 2003]. Cretaceous deformation in the retroarc SFTB was accommodated by the Canyon Range, Pavant, Paxton and Gunnison thrusts and duplexes in central Utah [*Mitra et al.*, 1994; *Mitra and Sussman*, 1997; *DeCelles*, 2004; *DeCelles and Coogan*, 2006] and by the Sheeprock, Tintic Valley, Midas, Nebo and Charleston thrusts and salient (CNS) in northern Utah [*Mitra*, 1994; 1997; *Constenius et al.*, 2003; *Kwon and Mitra*, 2004]. During the Early and early-Late Cretaceous the Canyon Range and Pavant thrust and duplexes accommodated the largest fraction of shortening with estimates, on the order of ~118 and ~74 km, respectively [*DeCelles and Coogan*, 2006]. The Paxton and Gunnison deformational phases were responsible for an additional ~30 km of shortening from the Turonian through early Paleocene [*DeCelles and Coogan*, 2006]. The early kinematic and chronological evolution of the northern Utah SFTB (Sheeprock, Tintic Valley, Midas thrusts) have been reconstructed by *Mitra* [1997]; *Kwon and Mitra* [2004], and *Guenthner et al.* [2014]. Palinspastic restorations bracket shortening on the Nebo and Charleston thrusts to 35 and 50 km, respectively [*Constenius et al.*, 2003]. These thrusts combined with the Santaquin culmination are elements of the CNS and are responsible for ~100km of Early and early-Late Cretaceous shortening [*Constenius et al.*, 2003].

Stratigraphic Framework

The Late Cretaceous Cordilleran foreland basin and in particular the Book Cliffs segment (east-central Utah to west Colorado) has been paramount to the development of essential foreland basin sequence stratigraphy concepts and has served as a key natural laboratory for promoting a fundamental understanding of the interplay between tectonics and foreland basin stratigraphy including staking patterns, strata geometry, and the extent and expression of sequence-parasequence boundaries [e.g., *Van Wagoner*, 1991a; b; *Kamola and Huntoon*, 1995; *Van Wagoner*, 1995; *Yoshida et al.*, 1998; *Houston et al.*, 2000; *Yoshida*, 2000]. The strata exposed in the Book Cliffs comprise a range of fluvial to offshore marine sedimentary successions deposited in the foredeep of the Cordilleran foreland basin and record fluctuations in sediment input, eustasy, and thrust-induced flexural subsidence [*Fouch et al.*, 1983; *Kamola and Huntoon*, 1995; *Houston et al.*, 2000; *McLaurin and Steel*, 2000; *McLaurin and Steel*, 2007]. The overall Late Cretaceous foreland stratigraphy forms a shallowing upward and thinning eastward progradational clastic wedge [*Lawton*, 1983]. The bottom of this clastic wedge is marked by a major marine transgression of Turonian age, immediately followed by accentuated basinward incursions of fluvial to shallow-marine sandy facies known as the Ferron and Emery sandstones [e.g., *Fisher et al.*, 1960; *Hale*, 1972; *Fouch et al.*, 1983; *Ryer*, 1983; *Edwards et al.*, 2005; *Ketzer and Morad*, 2006; *Olariu et al.*, 2010; *Fielding*, 2011; *Li et al.*, 2011]. Detailed studies on Campanian Book Cliffs foreland basin strata architecture and shoreline stacking trajectories, chronologically constrained by Ammonites biozones, further help subdivide this progradational Campania clastic wedge into three [*Fouch et al.*, 1983; *Cobban et al.*, 2006; *Aschoff and Steel*, 2011a]. A lower clastic wedge (wedge A) includes all six members of the Blackhawk Fm. and the Castlegate Sandstone (S.s.) [*Aschoff and Steel*, 2011a]. This stratigraphic interval, spanning

~5 m.y., is up to 700 m thick near Price Canyon, Utah, and extends eastward 200-250 km [*Van Wagoner et al.*, 1990; *Van Wagoner*, 1991b; *Aschoff and Steel*, 2011a]. A middle clastic wedge (wedge B) includes the Buck Tongue and Middle Castlegate units (including distal Sego and Neslen formations), as well as the Corcoran and Cozzette Members of the Iles Formation, Mount Garfield. Wedge B spans ~1.9 m.y., has a maximum thickness of 123 m, and extends 400 km from Thistle, Utah, to east of Redstone, Colorado [*Aschoff and Steel,* 2011a]. The upper clastic wedge (wedge C) includes the Bluecastle Tongue, Lower Williams Fork Formation, Rollins Sandstone, and Bowie shale. Wedge C spans ~3.1 m.y., is up to 350 m thick and its spatial extent is unknown (due to its erosional truncation east of Snowmass, Colorado). However, a minimum estimate from Cottonwood Canyon, Utah, area to Snowmass, Colorado is 175–250 km [*Aschoff and Steel*, 2011a]. This spatiotemporal framework suggests that wedge B has the fastest progradation rate (163-192 km/m.y.) compared to wedges A (30-38 km/m.y.) and C (56-81 km/m.y.). Aschoff and Steel (2011) hypothesized that the fast progradation and flat trajectory of wedge B is the result of a reduction in the regional accommodation profile as it was perturbed by the onset of Laramide basement-core uplift. This coupled with an active thrust belt and high sediment supply may explain the discrepancies in the style and rate of progradation of all wedges [*Aschoff and Steel,* 2011a].

This high-resolution detrital geo-thermochronology study takes advantage of the well-known Late Cretaceous Ferron Sandstone Member of the Mancos Shale to the Bluecastle Tongue of the Castlegate Sandstone stratigraphic framework exposed in the east flank of the Wasatch Plateau (Utah) to Grand Junction (Colorado) Book Cliffs to elucidate the spatiotemporal relation between deformation and sedimentation in the SFTB at a million-year time scale resolution.

Foreland basin sediment composition and provenance constraints

In the Cordilleran foreland basin, central-northern Utah, clast and sandstone compositional studies have elucidated the unroofing evolution of the SFTB by relating composition to sources. The upper section of the Indianola Group (Funk Valley and Sixmile Canyon Fms.) and Canyon Range Conglomerate (Leamington Canyon and Pass Canyon Members) represent the proximal coarse-clastic up-dip depositional western equivalent of the Book Cliffs foredeep strata west and on the Wasatch Plateau [e.g., *Lawton*, 1982; *Lawton et al.*, 2007: and references therein]. The Indianola Group is characterized by an upsection carbonate-to-quartzose compositional trend suggesting progressive erosional denudation of the SFTB miogeoclinal sequence [e.g., *Armstrong*, 1968; *Lawton*, 1986; *Decelles et al.*, 1995]. However, due to the complex stratigraphic and structural evolution of the source not all proximal Indianola Group deposits record clear-cut clastic compositional trends indicative of progressive unroofing [e.g., *Jefferson*, 1982].

Detailed petrographic sandstone analysis in the Book Cliffs Castlegate Sandstone, Middle Castlegate, and Bluecastle Tongue in Price Canyon and the vicinity of Green River have sandstone compositions dominated by quartz (>80%) with minor lithic fragments (<20%) [*Lawton*, 1983]. The composition agrees with the quartz-rich nature of the more proximal time-equivalent foredeep (Sixmile Canyon Formation) and wedgetop (Leamington Cyn and Pass Cyn Members) sandstones and conglomerates [*Lawton*, 1986; *Lawton et al.*, 2007]. Paleocurrent data from the lower Castlegate Sandstone show a predominant ESE direction that transitions up-section to a ENE direction in the Bluecastle Tongue. Conglomerate clasts in proximal Blackhawk Fm. (north Central Utah) are mostly Pennsylvanian-Permian quartzite (>50%) and

include minor clast components of Precambrian-Cambrian quartzite and Paleozoic chert and carbonate in approximately equal proportions [*Horton et al.*, 2004]. Clast composition in the Castlegate-Price River show a predominance of Pennsylvanian-Permian quartzose sandstones with minor Paleozoic chert derived from back-thrusting in the CNS. Compositionally, the Blackhawk Fm. sandstone is characterized by 91% quartz grains with minor lithics (~6%) and feldspar (~3%). In comparison, the sandstone constituents of the Castlegate-Price River unit are defined by a larger proportion of quartz grains (~97%) with less lithic (~1%). The clast composition and south-eastern paleocurrents directions in the Castlegate-Price River section in Dry Hollow suggest a dominant CNS derivation [*Horton et al.*, 2004].

Proximal detrital zircon geo-thermochronology

Progressive unroofing of the Canyon Range, Pavant, and Nebo thrusts sheets is manifested in the DZ (U-Pb) and DZHe age trends recorded in the Indianola Group (Chapter 1). The Sanpete and Funk Valley Fms. (lower Indianola Group) document mixing of Precambrian, Paleozoic, and Mesozoic strata likely sourced from Precambrian-Paleozoic strata in the Canyon Range thrust sheet and erosion of Mesozoic-Paleozoic strata in the easternmost Pavant and Nebo deformational fronts (Chapter 1). Moving up-section into the Sixmile Canyon Fm., the DZ U-Pb age spectra become dominated by Precambrian-Paleozoic DZ ages, recording the unroofing of Precambrian-Paleozoic strata of the Canyon Range and potentially Sheeprock-Tintic in central and northern Utah, respectively. The unroofing sequence is collaborated by the progressive younging of DZHe cooling ages containing Permian-Carboniferous in the Sanpete Fm. to Mesozoic DZHe ages in the Funk Valley and Sixmile Canyon Fms. (Chapter 1). Active

deformation in the Campanian is inferred from DZHe ages indistinguishable from depositional age in the Sixmile Canyon Fm.

In the Canyon Range Conglomerate, DZHe ages from time-equivalent strata chronicle the progressive unroofing of Paleozoic to Precambrian strata indicated again by the younging of DZHe ages and reduction of Paleozoic DZ ages in the conglomeritic succession above the Cow Canyon Member (i.e., Wild Horse-, Leamington-and Pass-Canyon Members). Other important provenance studies have utilized DZ U-Pb geochronology from more distal Cordilleran strata on the Colorado Plateau (including Book Cliffs strata) to trace the eastward and northward transport of Precambrian, Paleozoic and Mesozoic DZ grains from the Sevier orogenic belt, the magmatic arc, and Mogollon highland sources [e.g., *Dickinson and Gehrels*, 2008b; *Dickinson and Gehrels*, 2009b; *Lawton and Bradford*, 2011].

METHODOLOGY

Detrital zircon geo-thermochronology

Detrital zircon (DZ) U-Pb in-situ dating has been widely employed in provenance studies to help reconstruct the hinterland deformational history, unroofing events, paleo-drainages and paleogeographic evolution by relating DZ U-Pb ages to crystallization ages of source terranes. In the absence of index fossils, the youngest DZ age mode can serve as a maximum age estimate (MDA) for deposition [*Dickinson and Gehrels*, 2009c]. DZ ages combined with (U-Th)/He dating (single-grain (U-Th)-(He-Pb) double-dating) provide critical constraints on the low-temperature cooling history of the sediment source region and also provides a mean to spatially and temporally link sedimentation to hinterland exhumation [e.g., *Rahl et al.*, 2003; *Reiners et al.*, 2005]. The time span between exhumation and deposition is determined by calculating the

difference between DZ (U-Th)/He (He) ages and stratigraphic age (i.e., lag time) [*Painter et al.*, 2014]. First-cycle fast-cooled volcanic grains in which DZ U-Pb ages equal or approximately equal DZHe ages must be identified and excluded from rapidly exhumed (cooled) structural elements for meaningful lag-time considerations [*Reiners et al.*, 2005; *Saylor et al.*, 2012]. The DZHe age and resulting lag time estimates can provide constraints on magnitude and timing of active deformation and erosion during syn-tectonic deposition [*Saylor et al.*, 2012; *Painter et al.*, 2014]. DZHe ages indistinguishable from depositional age, indicated by a near-zeros depositional lag time, indicate major tectonic cooling related to rapid fault block exhumation and denudation. The exhumation and sequential unroofing history of orogenic systems and orogenic and sediment dispersal processes, thus can be delineated by employing DZ (U-Th)-(He-Pb) dating techniques within their proper structural and stratigraphic context.

(U-Th)/He and U-Pb dating

(U-Th)/He dating is based on the radiogenic ingrowth, retention and diffusive loss of ^{4}He, formed during the decay of radioactive U, Th, and Sm isotopes. The thermal window associated with the zircon (U-Th)/He age is 140-200 °C [*Reiners et al.*, 2002; *Stockli*, 2005; *Wolfe and Stockli*, 2010]. This temperature interval is mainly controlled by the mineral specific diffusion kinetics of He, the cooling and exhumation rates undergone by the zircon, the alpha dosage (damage) accumulated, and grain size [e.g., *Nasdala et al.*, 1995; *Nasdala et al.*, 2001; *Reiners and Farley*, 2001; *Palenik et al.*, 2003; *Nasdala et al.*, 2004; *Shuster and Farley*, 2009; *Goldsmith et al.*, 2012; *Guenthner et al.*, 2014]. In-situ U-Pb dating takes advantage of the same Uranium decay series but opposed to measuring the alpha nuclides (i.e. ^{4}He) it measures the final and stable radiogenic lead (Pb) product. The zircon U-Pb age/s are calculated from ^{206}Pb/^{238}U,

and $^{207}Pb/^{206}Pb$ ratios ($^{207}Pb/^{235}U$ is calculated from measured $^{206}Pb/^{238}U$ -$^{207}Pb/^{206}Pb$). The ages obtained by U-Pb dating are commonly attributed to zircon magmatic or metamorphic crystallization because Pb diffusion in zircon ensues at temperatures greater than 900 °C [*Cherniak et al.*, 1991; *Lee et al.*, 1997; *Cherniak and Watson*, 2001].

(U-Th)/He and U-Pb dating analytical procedure

Zircon (U-Th)/(He-Pb) double-dating analyses were performed at UTChron facilities in the Jackson School of Geosciences at the University of Texas at Austin. Zircons were separated using standard mineral separation methods and placed on tape mounts for in-situ laser ablation U-Pb dating. Samples were analyzed with a PhotonMachine Analyte G.2 Excimer laser and Element 2 ICP-MS. The zircon U-Pb dating procedure involves ablating a 30 μm diameter by 16 μm deep pit on the un-polished surface of randomly selected zircon grains. To achieve a 95% confidence that we incorporated DZ components representing more than 5% of the total population we analyzed approximately 120 zircon grains per sample [*Vermeesch*, 2004]. The primary and secondary reference standard were GJ1 [*Jackson et al.*, 2004] and Pak1 (in-house zircon standard ~42 Ma from Pakistan). U-Pb data was reduced using Iolite software and VizualAge [*Paton et al.*, 2011; *Petrus and Kamber*, 2012]. Only DZ ages with a percentage of discordance (i.e. discordance defined as 1-($^{206}Pb/^{238}U$ age/$^{207}Pb/^{206}Pb$ age)*100) [*Gehrels*, 2011] smaller than 30% were included in the detrital analysis. The $^{206}Pb/^{207}Pb$ ages were chosen over $^{206}Pb/^{238}U$ ages when older than 1.2 Ga to improve DZ age precision [*Gehrels et al.*, 2008]. DZ U-Pb age depth profiling allowed screening for high uranium and low lead concentrations in outer rims indicative of lead loss.

Zircons for (U-Th)/He dating were selected as a function of DZ U-Pb age components. DZ U-Pb ages with a percentage of discordance greater than 10% and geometrically inadequate for standard FT correction (i.e., flat, broken or rich in inclusions) were excluded [*Farley et al.*, 1996]. Zircon grains were laid inside a platinum package and placed inside a vacuum chamber where helium extraction was accomplished by diode laser heating at temperatures of ~1050 °C. The extracted gas is spiked with ^{3}He for isotope dilution, purified using a charcoal cryogenic trap and a cold Zr-alloy getter system and ultimately analyzed with a Blazers Prisma QMS-200 quadrupole mass-spectrometer. This step is repeated until ^{4}He gas extractions are <1% of the total extracted ^{4}He. All zircons are then individually unpacked and spiked with a solution of known ratios of ^{235} U/ ^{238}U, ^{230} Th/^{232}Th and ^{149}Sm/^{147}Sm prior to a dissolution agenda that includes HF, HNO_3, and HCL acids in high pressure dissolution vessels. The resulting solutions were all analyzed on a Thermo Element2 ICP-MS. Zircon (U-Th)/He ages are calculated using isotope dilution techniques and age equation described in *Vermeesch* [2008].

Sampling Strategy

Coarse to medium grain sandstones were sampled from multiple stratigraphic units and Book Cliffs localities in Utah to Colorado (Figure 2.1). The sampling was performed in proximal (Price Canyon, Utah) to distal (Grand Junction, Colorado) fluvial and marine deposits of the Upper Cretaceous Mesa Verde Group in the Cordilleran foredeep section at the million-year stratigraphic resolution [*Cobban et al.*, 2006]. The stratigraphic units sampled, in ascending stratigraphic order, include the Ferron and Emery sandstones, the Star Point, Blackhawk, and Castlegate Fms. The six members of the Blackhawk Fm., which include in depositional order, the Spring Canyon, Aberdeen, Kenilworth, Sunnyside, Grassy and Dessert members and three

members of the Castlegate Fm. (Castlegate Sandstone, Middle Castlegate and Bluecastle tongue), were sampled in the Book Cliffs, Utah to obtain the desired temporal resolution (see appendix table 1a for sample coordinates). In the southern part of the Piceance Basin, north of Grand Junction Colorado, the Campanian Corcoran, Cozzette, and Rollins sandstones from the Mt. Garfield Fm. (Iles Fm. of *Aschoff and Steel* [2011a]) were sampled to correlate to the very distal time-equivalent DZ U-Pb populations. With the same purpose, lowstand tidal-dominated Meeker and Marapos units, north of Meeker City (Colorado) were also collected. DZ U-Pb and DZHe ages from proximal conglomeritic strata were also incorporated to enable comparisons between wedgetop, proximal, and distal foredeep facies (Figure 2.1) (Chapter 1).

RESULTS

The detrital zircon U-Pb (DZ) and (U-Th)/He (DZHe) data in this study are grouped into stratigraphic transects from various geographic locations (Figure 2.1 and 2.2). The formations, member or units composing each stratigraphic transect are discussed in their corresponding section below and are organized from proximal (Price River Canyon, Utah) to distal (Grand Junction, Colorado) (Figure 2.2). Each stratigraphic section includes DZ U-Pb and DZHe populations. Figure 2.3 contains a detail graphic and kernel density estimator (KDE) representation of all DZ U-Pb and DZHe age components for each sample comprising the stratigraphic transects. KDEs and histograms were plotted using DensityPlotter 7.3 [*Vermeesch*, 2012]. Histogram bin width and KDEs bandwidth are indicated in figure captions. Zircon (U-Th)/He and U-Pb ages and errors used for these figures are in tables in the data repository section. The youngest DZ U-Pb age mode and/or single age are presented in Figure 2.3 only

where available, and are referred to as maximum depositional ages (MDA). More details on MDAs and comparison with depositional ages are in the discussion section.

The DZ age results are outlined based on major North American tectonic provinces, including: Archean craton (2420-3500 Ma); cratonic Paleoproterozoic belts (1810-2015 Ma); Yavapai-Mazatzal orogenic belts (1535-1810 Ma); anorogenic Mesoproterozoic plutons (1300-1535 Ma); Grenville orogeny (905-1300 Ma); Peri-Gondwanan terranes (510-725 Ma); Appalachian plutons (285-510 Ma); and Cordilleran-Sierran volcanic arc (CSVA) (60-285 Ma) [*Dickinson and Gehrels*, 2009b]. The detrital zircon (U-Th)/He age components are described in terms of Geologic periods and epochs as defined by the International Stratigraphic Chart v2015/01 [*Cohen et al.*, 2013; updated] due lack of a well-established DZHe cooling record.

In general, six to eight DZ U-Pb age modes are recognized from the Ferron to the Bluecastle Tongue based on natural gaps in the DZ U-Pb age distribution and previously inferred magmatic phases in North America [e.g., *Gehrels et al.*, 1995; *Dickinson and Gehrels*, 2003; *Dickinson and Gehrels*, 2009b; *Dickinson and Gehrels*, 2009a; *Lawton et al.*, 2010; *Lawton and Bradford*, 2011]. Each DZ U-Pb mode for each sample was double dated (U-Th)/(He-Pb), however, no clear DZHe ages distinction could be made based on individual DZ U-Pb modes. Zircon (U-Th)/(He-Pb) double dating additionally served to exclude first cycle volcanics from all DZHe histograms and KDEs. The youngest non-volcanic DZHe ages differ per sample and are not described below. However, Figure 2.8 shows a compilation of the youngest DZHe ages based on composite time-equivalent DZHe age population.

Price River Canyon Zircon U-PB-He Ages

Samples from deltaic facies in the Santonian-Campanian Panther Tongue, Storrs Sandstone, and Spring Canyon Member yield DZ U-Pb populations dominated by Grenville (19-26%), Yavapai-Mazatzal (16-20%), Appalachian plutons (12-15%) and CSVA (2-12%) DZ U-Pb age modes. The sampled coastal plain deposits of the Aberdeen Mbr. to the fluvial Bluecastle Tongue contain all major North America DZ U-Pb age modes except for the CSVA, which only appears again in the middle Castlegate unit DZ population. The largest DZ fractions are Grenville (23-35%), Yavapai-Mazatzal (19-28%), and Appalachian plutons (7-14%) in age (Figure 2.3a).

The Panther Tongue records Paleozoic to Mesozoic DZHe ages with no clear modes whereas the Storrs Sandstone mainly shows two DZHe age modes each containing ~34% of Jurassic and Cretaceous DZHe ages. The Spring Canyon and Aberdeen members and the Castlegate Sandstone yield a larger Paleozoic DZHe age fraction (63-58%) with distinct Devonian-Silurian and Carboniferous-Permian modes. From the Middle Castlegate to the Bluecastle Tongue, Mesozoic DZHe ages compose 52-85%, and late Paleozoic DZHe ages represent 7-39%. The Middle Castlegate and the Spring Canyon Member of the Blackhawk Formation contain the largest fraction of Late Cretaceous DZHe ages in this transect with 14 and 13%, respectively (Figure 2.3b).

North of San Rafael Swell Zircon U-PB-He ages

Both the Ferron and the Emery sandstones are dominated by Cretaceous U-Pb DZ ages representing 33% and 18% of the populations, respectively with lesser proportions of Yavapai-

Mazatzal (15-20%) and Grenville DZ ages (17%). The Kenilworth Member is largely dominated by three Precambrian DZ age modes: Grenville (30%), anorogenic Mesoproterozoic plutons (22%) and Yavapai-Mazatzal (13%). The Appalachian Paleozoic plutons and CSVA ages in this member represent less than 12% of the entire sampled population (Figure 2.3b).

Samples north of the San Rafael Swell yield predominantly Mesozoic and Paleozoic DZHe ages with a small percentage of Precambrian DZHe ages. The Ferron Sandstone is characterized by Jurassic (35%) and Permian DZHe ages (15%). The Emery S.s. yields 26% Jurassic and Triassic DZHe ages and 12% Permian and Carboniferous DZHe ages. The Kenilworth Member has 25% Jurassic, 19% Carboniferous, and 22% Cretaceous DZHe ages, and two additional DZHe age populations can be identified at Jurassic-Cretaceous and Permo-Carboniferous. The Ferron and Emery sandstone, yield between 6-10% Cretaceous DZHe ages (Figure 2.3b).

Sunnyside Canyon Zircon U-PB-He Ages

Overall, the DZ age populations are dominated by Grenville (17-38%), Yavapai-Mazatzal (11-25%), anorogenic Mesoproterozoic plutons (8-18%), Appalachian Paleozoic plutons (4-13%) and CVSA (largely 7-14%) ages. The Castlegate S.s. sample contains the largest fraction of accreted Peri-Gondwanan terranes DZ ages (14%) and the Middle Castlegate has the smallest fraction of Late Jurassic-Cretaceous DZ ages. The Middle Castlegate and Castlegate Sandstone are dominated by Yavapai-Mazatzal ages, whereas the other samples are dominated by Grenville ages (Figure 2.3c).

Samples from the Sunnyside Canyon contain dominant Mesozoic DZHe ages (47-95%). The Kenilworth and the Sunnyside members contain equal proportions of Jurassic and Triassic DZHe ages (22-23%) as well as 17% Early Cretaceous DZHe ages. In contrast, the Castlegate S.s. preserves a smaller Triassic DZHe age fraction (7-11%) and a significantly larger Permian DZHe age fraction (22-27), still preserving 20-22% Jurassic DZHe ages. The Middle Castlegate and Bluecastle Tongue incorporates the largest fraction of Early Cretaceous DZHe ages (31-32%) and the Middle Castlegate has the largest fraction of Late Cretaceous DZHe ages (26%) (Figure 2.3c).

Green River Zircon U-PB-He ages

No significant differences can be observed except that all populations are dominated by Grenville DZ ages and that the Bluecastle Tongue and Sunnyside Member record 18 and 25% of CVSA DZ ages, respectively (Figure 2.3d).

DZHe ages from Green River samples mostly range between Paleozoic and Mesozoic. Mesozoic ages dominate DZHe populations except for in the Bluecastle Tongue and Tusher Canyon Sunnyside samples. All DZHe age populations have a significant Jurassic fraction (20-31%) except for the Tusher Canyon Sunnyside sample that yields 15%. The relative proportions of Early and Late Cretaceous DZHe ages in the Blackhawk members range from 5-25% and 0-20% respectively. The Castlegate S.s. and Bluecastle Tongue contain 10% and 5% of Early Cretaceous DZHe ages and 5% and 10% Late Cretaceous DZHe ages respectively. Overall, Triassic and Permian DZHe ages represent 6-20% and 10-23% of all populations

correspondingly. Carboniferous DZHe ages represent ~20% of the Sunnyside samples and 14% of the Bluecastle Tongue sample (Figure. 2.3d).

Colorado Zircon U-PB-He Ages (Mount Garfield Fm., Marapos and Meeker samples)

The Colorado DZ populations are dominated predominantly by Yavapai-Mazatzal DZ (18-31%), CVSA (13-31%) and Grenville DZ ages (11-28%). Appalachian Paleozoic plutons DZ ages overall represent 3-8% of the DZ populations except for the Loyd S.s. that incorporated 14% (Figure 2.3e). The Meeker and Marapo are dominated by CVSA (28-30%) and Yavapai-Mazatzal (22-26%) DZ ages. The Loyd, Sego and Neslen samples contain Grenville (20-28%), Yavapai-Mazatzal (18-26%), CSVA (13-19%) and Appalachian (7-17%) DZ ages.

DZHe ages from Colorado samples are Paleozoic and Mesozoic in age. The Carboniferous (10-33%), Permian (6-25%), and Cretaceous (14-43%) DZHe ages dominate the overall sampled distribution followed by Jurassic (7-25%) DZHe ages. The Meeker, Marapos, Sego and Rollings sandstones have the largest fraction of Carboniferous (>20%) and Permian (>12%) DZHe ages. The Meeker and Neslen sandstones contain the highest percentage of Late Cretaceous ages at 33% and 32%, respectively (Figure 2.3e).

DISCUSSION

Maximum depositional ages

The youngest DZ age or age mode for each sample was examined to compare with its established depositional age and volcanic age source (Figure 2.3). No systematic relation

between age and uranium/thorium ratios or uranium concentration, indicative of potential metamorphism or lead loss was detected and thus no filters were applied [e.g., *Dickinson and Gehrels*, 2009c]. Maximum depositional ages (MDA) were determined from the weighted average of the youngest 2 or more grains that overlap at 2σ error YC2σ(2+) (Figure 2.3). This approach is different from *Dickinson and Gehrels* [2009c] YC1σ(2+) as it includes ages that overlap at 2σ instead of 1σ analytical error. In cases where no two DZ ages overlap at 2σ in the Late Cretaceous depositional age range, we displayed only the youngest single grain age [*Dickinson and Gehrels*, 2009c]. The MDAs determined in this study generally agree with previously established ammonite ages and stratigraphic correlations [e.g., *Cobban et al.*, 2006; *Aschoff and Steel*, 2011a]. Only four Late Cretaceous units yielded DZ U-Pb MDAs significantly younger than their biostratigraphic age. Those are the Ferron Sandstone (87.5±0.7 Ma), Emery Sandstone (83.5±2.3 Ma), the Bluecastle Tongue (67.6±1.8 Ma) samples in the Green River area Utah, and the Marapos Sandstone (76.8±1.3 Ma) north of Meeker Colorado. For comparison the ammonite ages bracketing the depositional age of the previously mentioned units are (~ 90.5-89 Ma), (85.7-83.9 Ma), (~ 75-74 Ma) and (~ 80 Ma), in the same order as above [e.g., *Edwards et al.*, 2005; *Cobban et al.*, 2006; *Steel et al.*, 2012]. The smallest age discrepancy between the YC2σ(2+) DZ U-Pb ages (including 2σ error) and ammonite ages ranges between 0-5 myrs. A systematic increase in YSG ages younger than depositional ages is visible in Turonian and Campanian strata (Figure 2.4). The age disagreement cannot be easily explained and requires further examination of correlative surfaces and stratigraphic correlations between the ammonite-bearing shales or previous thermo- or geo-chronometric ages constraining ammonite ages. Best methods and practices for determination of the youngest depositional ages are subject to debate and limited by sampling size and research objectives [e.g., *Dickinson and Gehrels*, 2009c;

Spencer et al., 2016]. The stratigraphic and age framework adopted in this study is the same utilized in [*Fouch et al.*, 1983; *Edwards et al.*, 2005; *Cobban et al.*, 2006; *Lawton et al.*, 2007; *Aschoff and Steel*, 2011a; *Steel et al.*, 2012].

Detrital zircon (U-Th)/(Pb-He) Sevier fold and thrust belt characterization

DZ (U-Th)/(Pb-He) ages from Precambrian to Mesozoic hinterland strata provide significant geo-thermochronometric spatial distinctions for provenance recognition in the Book Cliff and neighboring strata. First, in central Utah, the upper Precambrian to lower Paleozoic strata in the Canyon Range thrust and Pavant thrust sheets contains only Precambrian North American DZ U-Pb modes and is strongly dominated by Mesozoic DZHe (>80%) cooling ages with subordinate Paleozoic components (Figure 2.5). In northern Utah (CNS), Precambrian to Mississippian strata contains unique late Albian to Turonian cooling ages with a well-defined mode in the Cenomanian (Figure 2.5). Pennsylvanian to Permian strata of the Oquirrh Group (CNS) record Appalachian DZ U-Pb ages and are dominated by Yavapai-Mazatzal DZ U-Pb ages. Paleozoic DZ U-Pb and DZHe ages are significantly more abundant in Pennsylvanian through Jurassic strata and have been both associated with the Appalachian and Ancestral Rockies mountain-building events [e.g., *Rahl et al.*, 2003] (Figure 2.5). Carboniferous-Permian DZHe cooling ages have also been documented in the Colorado Plateau Jurassic strata [*Rahl et al.*, 2003]. Cordilleran magmatic arc and Peri-Gondwanan terranes DZ ages are only present in the SFTB Triassic, Jurassic and Cretaceous syn-orogenic strata (Chapter 1) [*Dickinson and Gehrels*, 2003; *Dickinson and Gehrels*, 2008a; *Dickinson and Gehrels*, 2009b; *Lawton et al.*, 2010].

Late Cretaceous Book Cliffs DZ provenance and relation to the central and northern SFTB structures

Provenance interpretations and the reconstruction of source-to-sink evolution, particularly in distal parts of the basin, can be significantly obscured by the structurally complex evolution of numerous stratigraphic intervals with similar composition in the SFTB as well as axial sediment transport from more distal sources. The Campanian proximal-to-distal foreland basin DZ geo-thermochronometric framework and systematic changes in modal frequency of North American DZ U-Pb modes and DZHe cooling ages reveal compound provenances that appear to be largely influenced by both the hinterland structural evolution and location relative to the central and northern Utah portions of the SFTB (Figure 2.6). The Upper Cretaceous Panther Tongue through Bluecastle Tongue strata all have the same DZ U-Pb North American and Paleozoic-Mesozoic DZHe cooling age components and thus they were combined based on stratigraphic age and location to evaluate provenance changes (Figure 2.6). Distinctions in Campanian SFTB sources were accomplished in light of spatial and DZ U-Pb-He comparisons to SFTB bedrock (described above) and more proximal syn-orogenic strata (Chapter 1). The Book Cliffs strata show an unexpected composite sediment provenance uncharacteristic of a simple or single unroofing sequence. The older Ferron, Emery and Star Point sandstones show no significant differences in DZ U-Pb and DZHe ages when compared to Campanian Book Cliffs strata and thus we assume a similar provenance.

Sediment derivation from both the central and northern Utah portions of the SFTB was determined by the DZHe cooling ages and abrupt changes in DZ U-Pb age modes in the Campanian Book Cliffs foreland basin. Evidence for central Utah, Precambrian to Cambrian Canyon Range and Pavant thrust sheet derivation is the large occurrence and broad range of

Jurassic to Cretaceous DZHe ages in Precambrian zircons likely exhumed during Paxton thrusting. Derivation from northern Utah, SFTB (CNS) sources is interpreted based on the following evidence: (1) there is a relatively high percentage of Paleozoic DZHe ages (30%) in the Book Cliffs (maximum of 40% in the Price River Canyon), which is difficult to reconcile alone by sources from the Canyon Mountain bedrock and Campanian Pass Canyon Member wedge-top deposits which contain < 20% and <10% Paleozoic DZHe ages, respectively (Figures 2.6). (2) The upper Paleozoic to Mesozoic strata, known to contain mostly Paleozoic DZHe ages (Figure 2.5), underwent deformation synchronously in the CNS that resulted in growth strata largely constituted by quartz-rich units derived from the Carboniferous-Permian Oquirrh group [*Constenius et al.*, 2003; *Horton et al.*, 2004]. The upper Paleozoic to middle Mesozoic stratigraphic record in the Canyon Range and Pavant thrust sheets appears absent in the Campanian [*DeCelles and Coogan*, 2006; *Lawton et al.*, 2007] (Figure 2.6). (3) A sudden increase in Paleozoic and Yavapai-Mazatzal DZ U-Pb ages in the Price River Canyon transect and its proximity to the CNS suggest upper Paleozoic and lower Mesozoic strata as their most likely source. This is additionally supported by paleo-currents directions indicative of a north-north-west derivation [*Lawton*, 1983; *Horton et al.*, 2004].

A lateral down-dip DZ and DZHe age percentage comparison against longitude clearly shows how DZ and DZHe age components vary as a function of location/distance form their alleged SFTB origin (Figure 2.6). The combined DZ U-Pb ages from proximal Canyon Range Conglomerate to distal Grand Junction Campanian strata show a clear systematic ~30% total reduction of Precambrian DZ U-Pb ages basinward. This requires the influence of an additional drainage and transport system in more distal portions of the basin.

In summary, the DZ U-Pb and DZHe ages require derivation from both (1) Precambrian and lower Paleozoic strata in central Utah, which are known to have undergone cooling mostly related to the Cordilleran (SFTB) exhumation (Figure 2.6), and (2) upper Paleozoic-Mesozoic strata containing detrital zircons that cooled during deformation in the Ancestral Rockies Mountain, Antler and Appalachian regions. Based on structural reconstructions and proximal provenance studies of the SFTB in northern and central Utah [*Constenius et al.*, 2003; *Horton et al.*, 2004], we propose that foredeep strata in the Price Canyon area and eastward were synchronously fed by two mayor transverse sources: (1) Precambrian and lower Paleozoic strata from the central portion of the SFTB (Canyon Range and Pavant thrust sheet), and (2) Permian-Jurassic and syn-orogenic Cretaceous strata exhumed by folding and back-thrusting in frontal CNS horses [*Constenius et al.*, 2003]. Systematic proximal-to-distal changes in DZ U-Pb and DZHe ages involve a third derivation and different transport mechanism than those discussed above.

Sediment axial transport to the shallow marine foreland basin deposits

Sediment origin, transport, and allocation in foreland basin systems are key aspects for understanding the influence of hinterland deformation on sediment dispersal patterns and facies distribution. DZ age populations reveal significant discrepancies in provenance between time-equivalent proximal and distal foreland basin deposits (Figures 2.3 and 2.6). Three DZ age modes with observable percentage variations downstream, including Grenville, Yavapai Mazatzal and Cordilleran-Sierran volcanic-arc (CSVA), are plotted against longitude and shoreline facies to further distinguish provenance, identify major transport systems, and track the extent of transverse sedimentation in relation to SFTB exhumation (Figure 2.7). The percentage

of CSVA in deltaic, shore-facies and distal fluvial facies is significantly greater than their proximal alluvial and fluvial equivalents (Figure 2.7a). Additionally, the abundance of Yavapai-Mazatzal DZ ages increases basinward relative to Grenville DZ ages (Figure 2.7b).

The DZ spatiotemporal percentage variation precludes a simple SFTB derivation and transverse sediment dispersal scenario, suggesting that the foreland basin was simultaneously fed by three distinct large drainage systems that spatially coevolved from the Cenomanian to the Campanian as the SFTB propagated eastward. The most likely scenario fitting the DZ geo-thermochronometric data involves axial fluvial or marine transport from southern sources such as the Sierran volcanic-arc and Mogollon highland (Yavapai-Mazatzal basement) to the marine environments of the foreland basin. Axial sediment transport in the Late Cretaceous foreland basin has been interpreted from strata architecture, paleocurrents, compositional and DZ geochronology studies in numerous locations and in discrete stratigraphic intervals spanning as far south as Nevada-Arizona [e.g., *Fillmore*, 1991; *Fillmore*, 1993; *Lawton et al.*, 2003; *Jinnah et al.*, 2009; *Lawton et al.*, 2014; *Szwarc et al.*, 2015]. The closest evidence for north-east axial river transport can be found in the Straight Cliffs, Wahweap, and lower Kaiparowits Fms. in the Kaiparowits Plateau of southern Utah [*Jinnah et al.*, 2009; *Lawton et al.*, 2014; *Szwarc et al.*, 2015]. These formations are time-equivalent to the Blackhawk and Castlegate Fms. in the Book Cliffs. The presence of abundant Yavapai-Mazatzal and subordinate CSVA DZ age components served as key evidence for previous models that propose southern derivation of zircon grains from the Mogollon highlands basement and Cordilleran magmatic arcs [*Jinnah et al.*, 2009; *Lawton et al.*, 2014; *Szwarc et al.*, 2015]. In this study, however, the percentage of Sierran volcanic arc DZ ages appears significantly larger and in proportion similar to Yavapai-Mazatzal DZ ages (Mogollon highlands basement), and fluvial strata contain an average of <3% CVSA

DZ ages whereas distal marine to lowstand facies contain an excess of >20% CVSA DZ average. The persistent presence of CSVA DZ ages laterally and up-stratigraphic dip suggests they are not restricted to episodes of fluvial drainage re-organization such as those found in the Kaiparowits, southern Utah. They are as well not restricted to delta types as a significant number of CVSA and Yavapai-Mazatzal DZ ages appears to dominate equally the distal facies of the river-dominated deltas of the Ferron Sandstones, wave-dominated deltas of the Emery and Blackhawk Formation and tide-dominated deltas on the Middle Castlegate. The above indicates that transverse or axial fluvial transport alone could not have supplied the influx of CSVA detritus to support the CSVA to proportions encountered down-dip. Thus, a reasonable explanation for the observed non-marine and marine DZ age disparity and lack of synchronicity with fluvial reorganization in southern segments requires longshore sediment transport and redistribution, potentially by strong tide- and wave- induced forces. However, it is unlikely these sediments were directly and uniquely delivered by long-distance shoreline parallel transport from southern volcanic and Yavapai-Mazatzal provinces since it is in disagreement with the proposed Cretaceous north-to-south longshore current direction [e.g., *Ericksen and Slingerland*, 1990]. Instead, I proposed that a large influx of CSVA DZ ages was delivered by axial river systems draining southern volcanic and Yavapai-Mazatzal provinces with outlets in the southern or potentially northern(?) proximities of the sampled area. Strong tides and waves controlled thereafter sediment redistribution causing the observed DZ age disconnect.

Alternatively, two other scenarios are conceivable: (1) hydraulic grain shape and size segregation in distal fluvial and marine facies and (2) major airborne dispersal of volcanic zircons across the basin and subsequent dilution in SFTB proximal alluvial-fluvial systems resulting in the apparent basinward increase of CVSA DZ U-Pb ages. Hydraulic grain-shape and

size segregation is unlikely to be the primordial reason for the lateral discrepancies in DZ U-Pb CSVA age percentages because Yavapai-Mazatzal DZ ages (a population with a wide range of size and grain morphology) also increases basinward which can be better explained by a provenance shift. Furthermore, many Grenville DZ grains were similar to the volcanic-arc DZ ages in size and euhedral shape and no basinward increase was detectable. The second scenario is also improbable because if airborn zircon deposition and subsequent proximal SFTB sediment dilution were controlling the CSVA age spatial distribution, it is expected that the CSVA DZ age mode be dominated by near depositional ages and evolve over time accordantly. However, this is not the case for syn-depositional ages constituting only a small percentage of the CSVA DZ U-Pb component. The up-section younging of a small portion of CSVA DZ ages chronicles renewed Late Cretaceous volcanism syn-deposition. The volcanic arc DZ components are mostly Albian to Santonian ages with subordinate Triassic-to-Early Cretaceous DZ ages (Figure 2.4). Cenomanian DZ ages are the dominant arc component indicating mostly Sierran volcanic-arc derivation (Figure 2.4).

The Campanian U-Pb DZ age fraction becomes significant in the uppermost stratigraphic section (Figure 2.4). No causal relation between DZ age percentages over time and high influx magmatism in the Cordilleran-Sierran magmatic arc [*DePaolo*, 1981; *Ducea and Saleeby*, 1998; *Ducea*, 2001; *DeCelles et al.*, 2009] or increase in tectonic activity in the Maria fold-and-thrust belt of central Arizona [*Knapp and Heizler*, 1990; *Salem*, 2009] has not been detected, excluding their potential impact on Cordilleran-Sierran and Yavapai-Mazatzal DZ age influx.

DZHe lag time ages, exhumation and styles of clastic wedge migration

Thermochronometric lag times are commonly used to link cooling events associated with unroofing and faulting in the hinterland to basin evolution [*Bernet et al.*, 2001; *Ruiz et al.*, 2004; *Rahl et al.*, 2007; *Saylor et al.*, 2012]. In the Campanian Book Cliffs foreland basin portion, three discrete clastic wedges (A,B,C) with different progradational rates were determined based on sediment facies, environmental control, shoreline stacking trajectories and ammonite biozones [*Fouch et al.*, 1983; *Cobban et al.*, 2006; *Aschoff and Steel*, 2011a]. Variations in the style and rate of clastic wedge progradation have been attributed to a reduction in accommodation space modulated by intra-basin Laramide basement-core uplift (wedge B) and/or active thrusting and high sediment supply from the SFTB [*Aschoff and Steel*, 2011a]. However, there is insufficient temporal resolution on the SFTB deformation history to support the tectonic role on sediment sourcing and wedge progradation. The youngest DZHe depositional lag times found on Late Cretaceous foreland basin strata were compiled from correlative strata to provide a robust assessment of the youngest DZHe age population and determine the relation between hinterland cooling and migration of the clastic wedges at the one-million-year resolution.

The DZHe lag-time age results in Figure 2.8 indicate that variations in the style and progradation rates can in fact be explained in the Campanian Book Cliffs foreland basin segment by episodes of hinterland exhumation. DZHe ages indistinguishable from depositional ages (i.e. near zero lag time) in the three members of the Blackhawk Fm. (wedge A), and the Bluecastle Tongue of the Castlegate Fm. (wedge C), indicate rapid exhumation in the hinterland temporally synchronous with the up-rising trajectories of clastic wedges A and C. Thus, we propose the shared rising trajectory and coastal to wave-dominated shorelines (i.e. coastal plain and wave dominated deltas) on both wedge A and C are largely influenced by episodes of active fast

hinterland exhumation and coeval large accommodation space generation. Conversely, wedge B, characterized by a flat shoreline trajectory and tide-influenced deltas, lacked renewed DZHe cooling ages and shows a limited coarse clastic (braided fluvial facies) migration [*Fouch et al.*, 1983; *Aschoff and Steel*, 2011a; *Aschoff and Steel*, 2011b]. The flat trajectory and tide-dominated deltaic facies extent of wedge B is best explained, as proposed and evidenced by *Aschoff and Steel* [2011a], by flexural attenuation due intra-basin basement-core uplift and tidal influences on sediment dispersal [e.g., *Rossi et al.*, 2016] rather than driven by major progressive deformation in the SFTB front. The lack of evidence for a cease in intrabasinal uplifts and migration of crustal load during deposition of wedge C suggest accommodation space was not uniquely driven by flexural subsidence, but rather by the combined effects of dynamic and flexural subsidence.

Accentuated sediment progradation with relatively flat shoreline trajectories and short depositional time span (<2 myrs) are also recorded in the Turonian river-dominated Ferron and Santonian wave-dominated Emery deltaic shorelines [*Edwards et al.*, 2005: and references therein]. Similar to wedge B, neither Ferron nor Emery strata recorded rejuvenated DZHe ages and are significantly influenced by CSVA and Yavapai-Mazatzal DZ ages (Figure 2.8), suggesting major hinterland cooling was not the principal driver. The observation although consistent with major sediment dispersal in clastic wedge B, does not support the shoreline depositional styles. The same way, wave-dominated shorelines (i.e., wedges A, C and Emery Sandstones) are not always linked to major cooling episodes.

Analytical resolution and uncertainty on ZHe ages are not sufficient to conclusively discard the influence of a shorter and lower magnitude deformational event in the SFTB hinterland. This is a problem when considering generation of depositional slope has been

postulated as a primary control on progradation direction and successive shoreline migration [e.g., *Edwards et al.*, 2005]. Nonetheless, the causal relation between hinterland exhumation and clastic migration is recorded by short DZHe lag-time ages, supporting hinterland deformation as the primary driver for clastic facies migration at high frequency cycles (~1-myrs). We conclude, however, short-lived rapid progradation of clastic wedges such as in wedge B and the Ferron and Emery Sandstones are not modulated by major hinterland deformation, but rather a combination factors such as sediment availability from in or outside the SFTB, accommodation space, and forcing factors such as minor deformation, flexure, eustasy and climate.

Composite DZ provenance from Late Cretaceous clastic wedges

DZ and DZHe ages from the formations comprising the individual clastic wedges were combined to examine population changes that may indicate provenance shifts due deformational events at a broader temporal resolution (Figure 2.9). Below we discuss infer DZ U-Pb and DZHe age provenance and sediment dispersal patterns (clastic wedges) in relation to exhumation of the SFTB.

The composite DZ U-Pb populations from wedges A, B, C and pre-Campanian wedges (i.e., Ferron, Emery, Panther T.) contain equivalent Precambrian-Paleozoic North America DZ U-Pb modes contrasted by the frequency of mostly CSVA, Grenville and Yavapai-Mazatzal DZ components (Figure 2.9). The abundance of Grenville and Yavapai-Mazatzal DZ U-Pb ages (after excluding CSVA DZ U-Pb mode due their strong percentage dependence to location) can be used to assemble the wedges into two DZ population groups. The first group includes by wedges A and C and contains 32-34% Grenville and 18% Yavapai-Mazatzal DZ U-Pb ages., The

second group includes wedge B and pre-Campanian wedges, and is defined by a more even Grenville (24-26%) and Yavapai-Mazatzal (25-28%) DZ age ratio (Figure 2.9).

In addition, wedges A and C appear dominated by Late Jurassic-Early Cretaceous DZHe ages, in contrast to wedge B, which is dominated by Late Cretaceous DZHe ages. This difference may reflect a change in source rocks with slightly different cooling histories (Figure 2.9). The increase in Grenville DZ ages and Late Jurassic-Early Cretaceous DZHe ages (major components in Precambrian and lower Paleozoic SFTB bedrock, upper Canyon Range Conglomerate and Indianola Group strata) in wedges A and C reflect SFTB derivation. On the contrary, the units dominated by Yavapai-Matzatzal ages in wedge B and pre-Campanian wedges suggest derivation from southern sources additional to SFTB [e.g., *Dickinson and Gehrels*, 2008b; *Lawton et al.*, 2014]. These age relationships and short DZHe lag times (indicative of SFTB exhumation) reinforce transverse transport from SFTB strata in Campanian wedges A and C. DZHe ages exclusively from Grenville and Yavapai-Mazatzal zircons were plotted to compare cooling histories, as significantly different sources have been proposed for Yavapai-Mazatzal (Mogollon Highlands) and Grenville DZ (omnipresent in Precambrian-Mesozoic strata of the SFTB) components. However, similar DZHe age peaks are observed on both components suggesting similar cooling histories matching those in the SFTB source (Figure 2.9). Yavapai-Mazatzal ages are a strong component in SFTB upper Paleozoic strata (Chapter 1) and distinguishing those from southern Mogollon highlands based on cooling history appear to be unmanageable due the broad record of cooling ages preserved in the upper Paleozoic Oquirrh strata containing a significant abundance of Yavapai-Mazatzal DZ U-Pb ages.

The combined youngest DZ modes (<900 Ma) become reduced more than an order of magnitude up-stratigraphic section likely in response to unroofing of Precambrian-Paleozoic

strata independent from wedge architecture or sediment composition (Figure 2.9). Similarly, DZHe ages appear to get younger up-stratigraphic section, also supporting unroofing of the SFTB.

Basin-scale source-to-sink model

DZ and DZHe age populations in the Book Cliffs containing all Precambrian to Mesozoic North America DZ U-Pb age components require the input of numerous stratigraphic sources and cannot be explained by only the progressive unroofing of the miogeocline deposits in the CRT-PVT sheets as commonly proposed [e.g., *Van Wagoner*, 1995; *Robinson and Slingerland*, 1998; *DeCelles*, 2004; *Hampson et al.*, 2005; *DeCelles and Coogan*, 2006]. The Book Cliffs foredeep sedimentation appears to be controlled by the synchronous unroofing of different stratigraphic units in the central and norther Utah portions of the SFTB as evidenced by the multi-component character of all DZ populations (Figure 2.3-2.6). Based on proximal foreland strata composition, geo-thermochronometric data, paleocurrents and SFTB structural reconstructions in central and norther Utah, we infer the most likely provenance for zircons with Paleozoic cooling ages to be upper Paleozoic to Mesozoic strata exhumed from shallow levels (<5 km) during back thrusting and exhumation of the frontal CNS. This explanation is preferred to frontal Pavant or Paxton thrusting derivation (which also exhumed and deformed Mesozoic strata during this time) because DZ geo-thermochronology evidence in the up-stream wedge-top and foredeep equivalent adjacent to Pavant and Paxton thrust chronicles mostly Precambrian-Paleozoic zircons yielding SFTB (Jurassic-Cretaceous DZHe ages) cooling ages (Chapter 1). The distal fluvial to mostly shallow marine Book Cliffs provenance seem to be modulated by axial transport yielding detrital zircons from the Mogollon Highlands and Sierran magmatic arc in

addition to the SFTB detritus. The axial fluvial (?) and long-shore marine transport systems co-evolved with the eastward migration of SFTB deformation and major transverse sediment delivery system from the Turonian to the Campanian with no apparent interruption. DZHe ages indistinguishable from depositional age, such as those found in clastic wedge A and C; indicate rapid cooling in the SFTB requiring kilometers of unroofing, exhumation and large mass transfer to the foreland basin in short periods. Thus, a chronological link between rapid exhumation related to active thrusting and sediment progradation can be established (Figure 2.8, 2.9 and 2.10). The up-rising trajectory in wedges A and C correlate with active and rapid hinterland deformation. Composite DZ and DZHe age populations support a dominant SFTB derivation for wedges A and C. A mechanism that could satisfy the observations in the foreland basin and geo-thermochronometric data involve abundant sediment supply overpowering progressive accommodation space generation induced by flexural and potentially dynamic subsidence, and eustasy during active thrusting and major exhumation (Figure 2.10). The migration of the clastic wedge is propelled by the massive sediment output and delivery from the SFTB but the exerted flexure limits the dispersion of sediments resulting over time in an up-rising shoreline trajectory (Figure 2.10). This accelerated deltaic clastic migration of wedge B does not record renewed exhumation and has proven to be a product of reduced accommodation space [*Aschoff and Steel*, 2011a]. Tidal processes may have additionally influence the extent of clastic migration [e.g., *Rossi et al.*, 2016]. The pronounced sediment dispersal of the Ferron and Emery are not chronologically in phase with DZHe ages recording rapid hinterland exhumation similar to the Middle Castlegate (clastic wedge B). Thereby, the migration of those clastic wedges was potentially driven by other forcing factors such as eustasy, climate or even smaller exhumation events not recorded in DZHe ages. An up-section systematic reduction in Paleozoic DZ modes

within the Turonian to Campanian stratigraphic section confirms progressive unroofing of SFTB Paleozoic through Precambrian strata in the Late Cretaceous. The derivation of short DZHe depositional lag times is unknown but likely associated with culminations and back-thrusting in the SFTB (Figure 2.10) [e.g., *Constenius et al.*, 2003; *DeCelles and Coogan*, 2006; *Lawton et al.*, 2007].

CONCLUSIONS

The detrital geo-thermochronometric data on Turonian through Campanian sandstones in the Book Cliffs and vicinity provide evidence for a composite provenance matching Precambrian to Mesozoic SFTB sources. Discrepancies in DZ U-Pb and DZHe age populations between proximal time-equivalent CRC, Indianola Group strata (central Utah), and foredeep sandstones in the Book Cliffs indicate that the DZ populations encountered in the Book Cliffs are strongly linked to the deformational evolution of the central and northern Utah SFTB and its lateral Precambrian to Mesozoic strata heterogeneities. Based on previous structural reconstructions of the Late Cretaceous SFTB and proximal coarser grain compositional and geo-thermochronometric data, we propose that the most likely sources for late Santonian-Campanian foredeep sandstones in the Book Cliffs are the upper Paleozoic-Mesozoic sections (containing mostly Paleozoic DZHe ages) eroded during back thrusting in the CNS in combination with Precambrian-Paleozoic strata (characterized by Mesozoic DZHe ages) from the Canyon Range and Pavant thrust sheets exhumed by Paxton thrusting.

Sediment delivery to the Late Cretaceous shallow marine foreland basin strata appears to be strongly influenced by an axial marine system as evidenced by the down-depositional-dip

increase in CSAV and Yavapai Mazatzal DZ age percentages. This axial sediment system transported Sierran volcanic-arc and Mogollon Highland sediments from the south to the Utah portion of the foreland basin and co-evolved uninterrupted with the eastward migration of the SFTB and compound transverse sediment dispersal. The compiled DZ geochronology data on proximal to distal foreland basin strata underscore the important role of axial sediment transport on sediment delivery into the marine portions of the Cordilleran foreland basin system. Thereby, foreland architecture in the marine portions can be largely influenced by longshore and/or tidal [e.g., *Steel et al.*, 2012] events causing axial sediment delivery.

DZHe depositional lag time and composite DZHe and DZ ages delineate a temporal correlation between clastic wedge progradation and progressive hinterland exhumation, in agreement with conceptual models tying pulses of sediment dispersion to active thrusting [*Burbank et al.*, 1988; *Kamola and Huntoon*, 1995; *Houston et al.*, 2000; *Horton et al.*, 2004]. Rates of clastic progradation in Campanian wedges, however, as defined by *Aschoff and Steel* [2011a] do not seem to correlate necessarily with pulses of major hinterland deformation nor shoreline depositional styles. Clastic wedges exhibiting near flat shoreline trajectories do not seem to correlate with pulses of major SFTB deformation in this foreland basin setting. The rate and extent of Campanian clastic migration seem to be controlled by factors other than or in addition to SFTB hinterland deformation such as availability of accommodation space, sediment supply, and potentially climatic forces. The DZ population discrepancies in time-equivalent foreland basin strata and duration attest for the intricate and multi-component nature of sediment delivery, dispersal, and mixing from the Sevier thrust belt.

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FIGURES

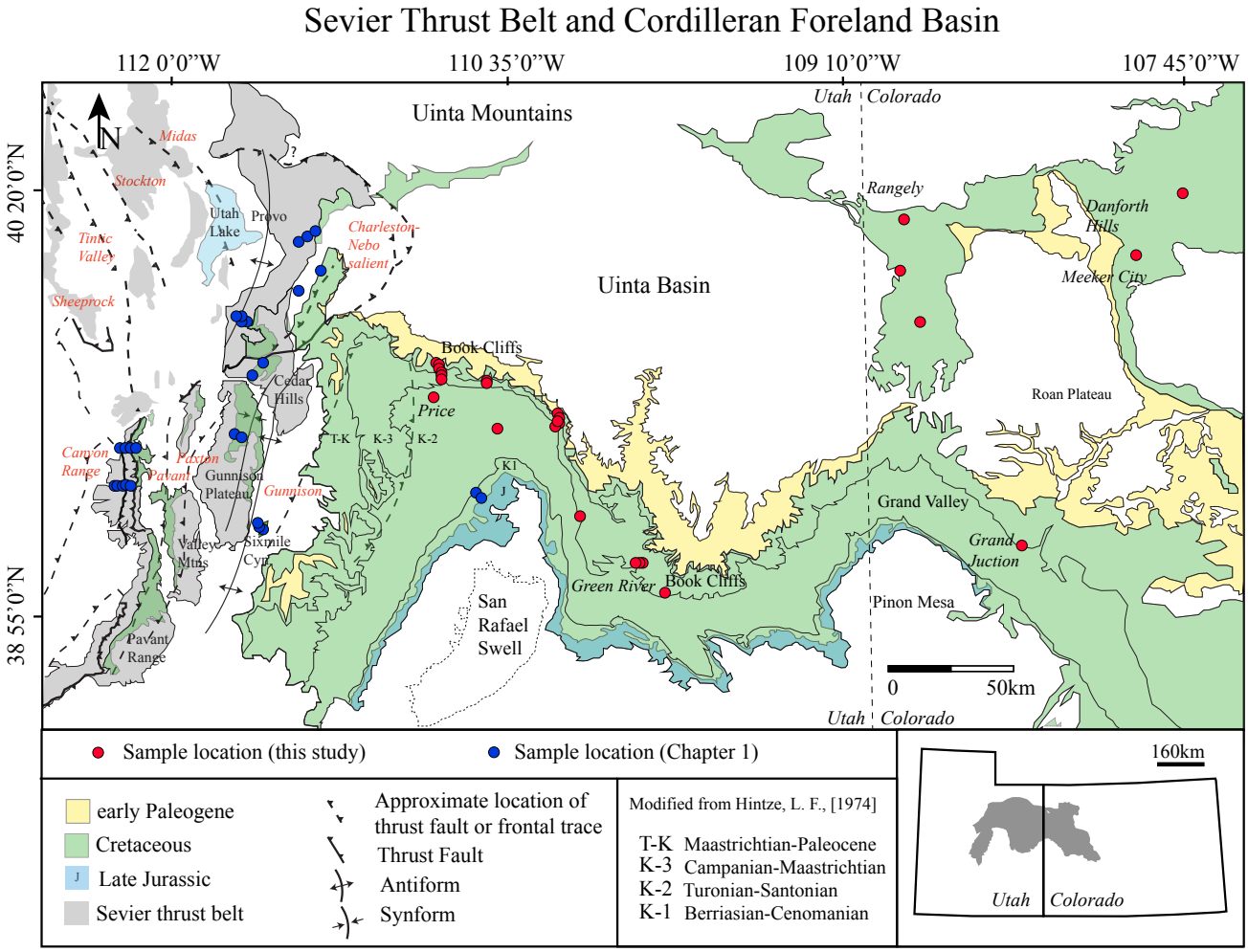


Figure 2.1. Index map of (1) samples collected on Late Cretaceous Utah-Colorado foreland basin strata including the Book Cliffs (red dots) and (2) location of SFTB faults and late Jurassic to early Paleocene strata. For more detail location information see supplementary material. Blue dots show location of samples used in figure 5 from Chapter 1. Thrusts faults are in red italic text. See appendix for coordinates.

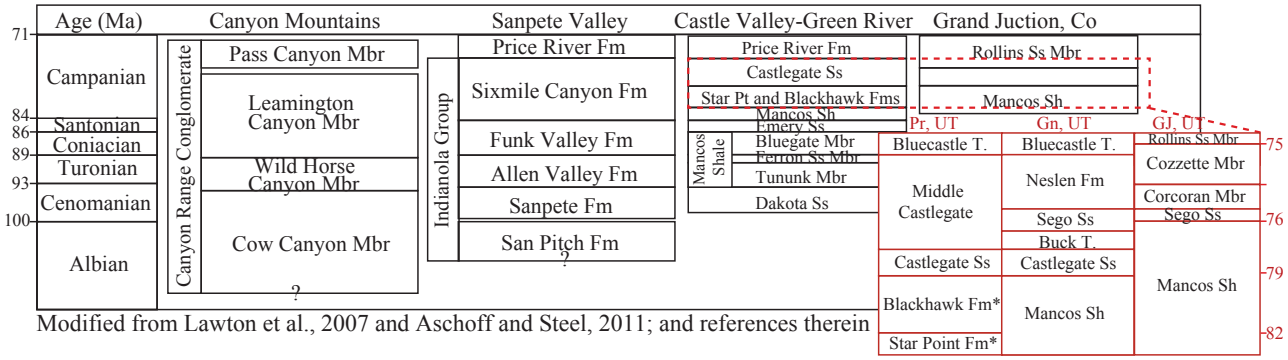


Figure 2.2. Cronostratigraphic chart of Late Cretaceous proximal to distal strata in central Utah and Colorado, Cordilleran Foreland Basin, USA.

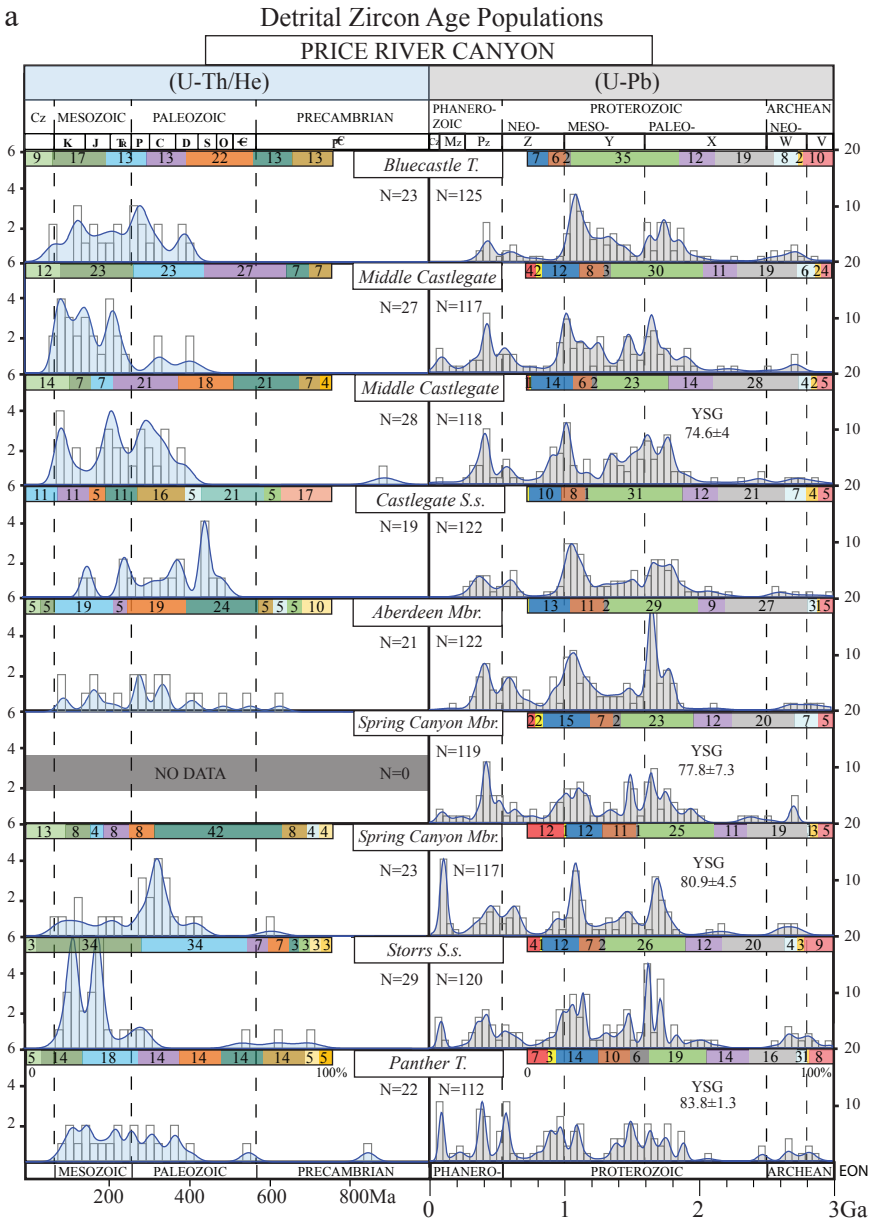


Figure 2.3. KDEs and histograms of detrital zircon U-Pb and (U-Th)/He age populations. This figure is divided in the following Book Cliffs stratigraphic transects: a) Price River Canyon, b) North of San Rafael Swell, C) Sunnyside Canyon, D) Green River, E) Grand Junction Colorado. The percentage bars shown on the right side (U-Pb) represent the percentage of DZ U-Pb ages that range within known anorogenic and orogenic magmatic events in North America [Dickinson and Gehrels, 2009b]. Percentage bars on the left side ((U-Th)/He) show DZHe age percentages based on geologic periods with ages as defined by International Stratigraphic Chart v2015/01 [Cohen et al., 2013; updated]. Maximum depositional age for each sample is inferred by weighted mean of the youngest two or more DZ ages overlapping at 2σ [e.g., Dickinson and Gehrels, 2009c]. The youngest single DZ age is also displayed if it is Late Cretaceous in age. The histogram bin width for DZ and DZHe ages is 50 and 20 Ma, respectively.

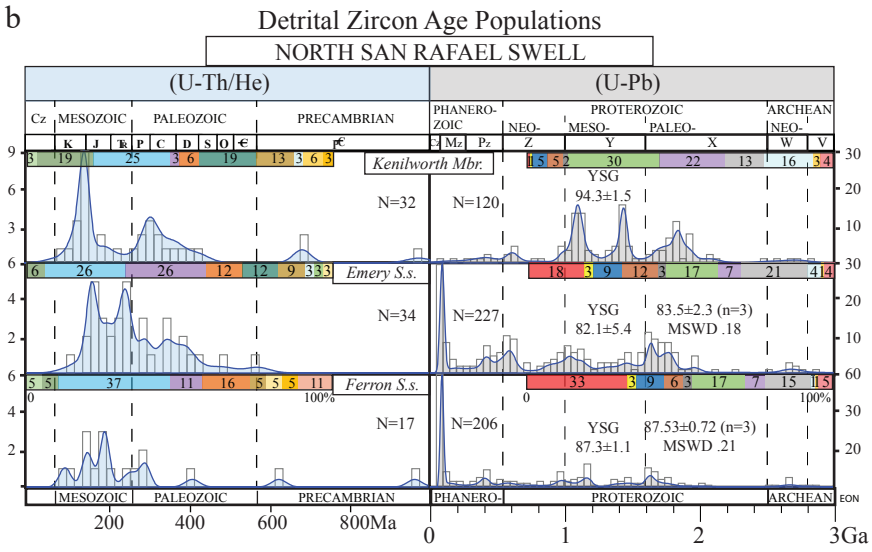

b
Detrital Zircon Age Populations
NORTH SAN RAFAEL SWELL
(U-Th/He)
(U-Pb)
Kenilworth Mbr.
Emery S.s.
Ferron S.s.
N=32
N=120
N=34
N=227
N=17
N=206
YSG
94.3±1.5
YSG
82.1±5.4
83.5±2.3 (n=3)
MSWD .18
YSG
87.3±1.1
87.53±0.72 (n=3)
MSWD .21
MESOZOIC
PALEOZOIC
PRECAMBRIAN
PHANERO-
PROTEROZOIC
ARCHEAN
200
400
600
800Ma
0
1
2
3Ga
EON

Figure 2.3b

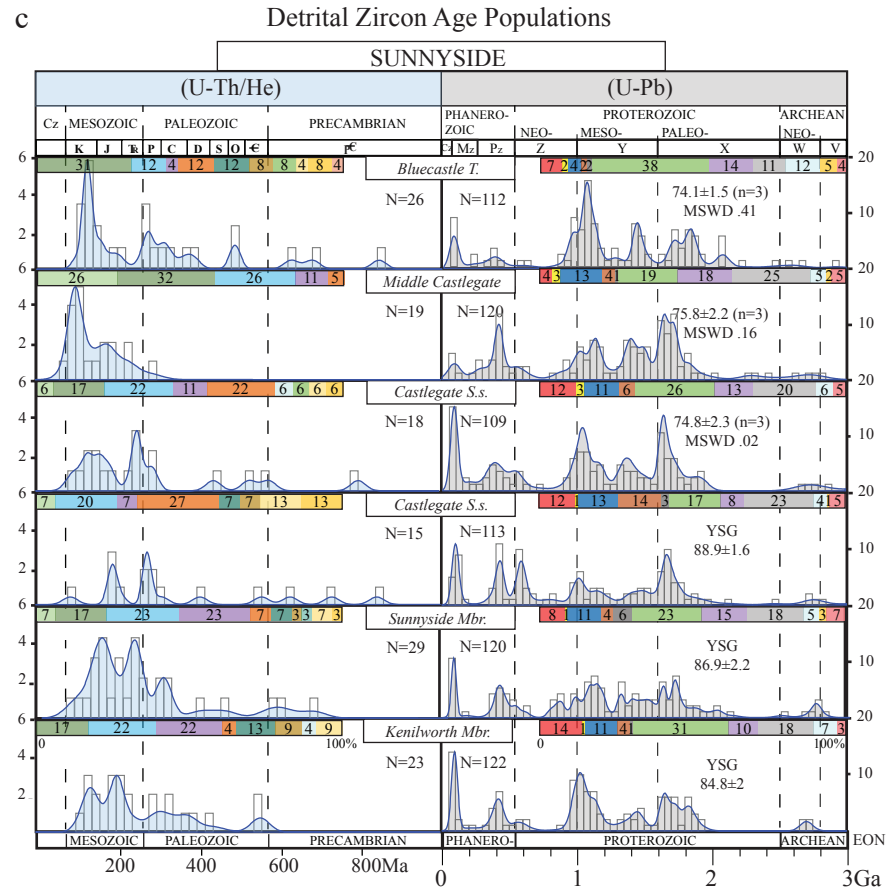

c
Detrital Zircon Age Populations
SUNNYSIDE
(U-Th/He)
(U-Pb)
Bluecastle T.
N=26
N=112
74.1±1.5 (n=3)
MSWD .41
Middle Castlegate
N=19
N=120
75.8±2.2 (n=3)
MSWD .16
Castlegate S.s.
N=18
N=109
74.8±2.3 (n=3)
MSWD .02
Castlegate S.s.
N=15
N=113
YSG
88.9±1.6
Sunnyside Mbr.
N=29
N=120
YSG
86.9±2.2
Kenilworth Mbr.
N=23
N=122
YSG
84.8±2
MESOZOIC
PALEOZOIC
PRECAMBRIAN
PHANERO-ZOIC
PROTEROZOIC
ARCHEAN
EON
200
400
600
800Ma
0
1
2
3Ga

Figure 2.3c

d

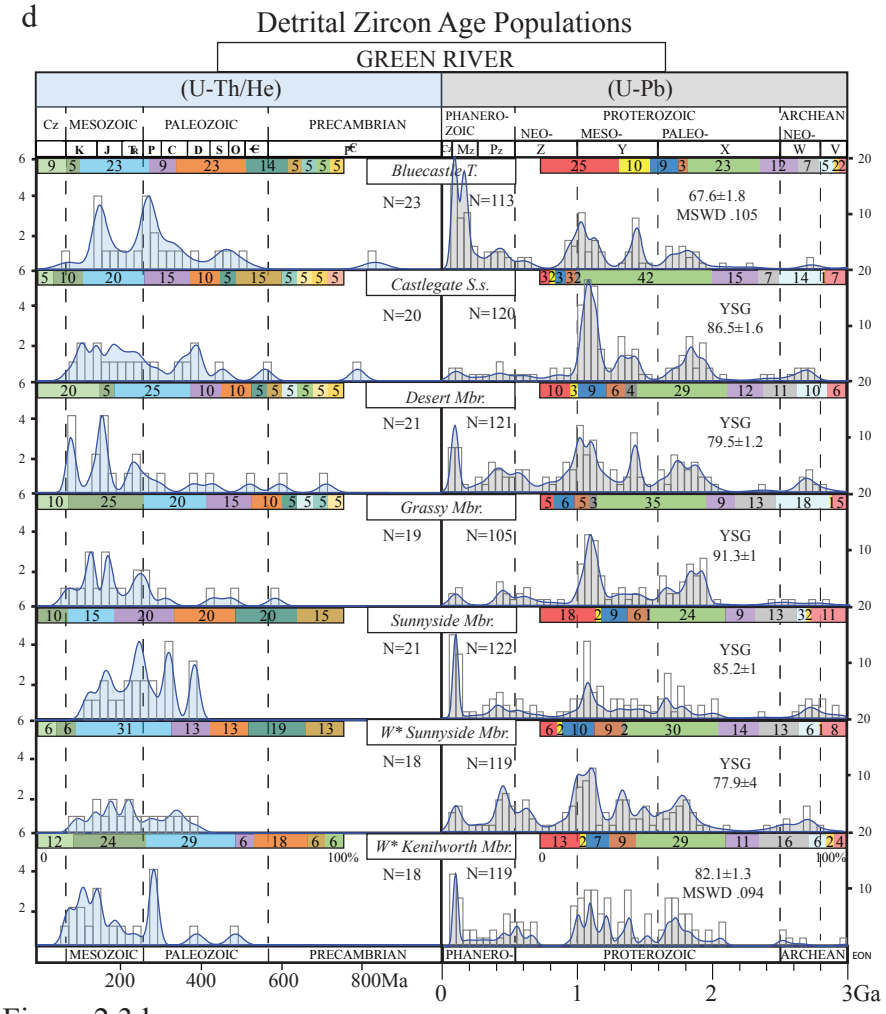
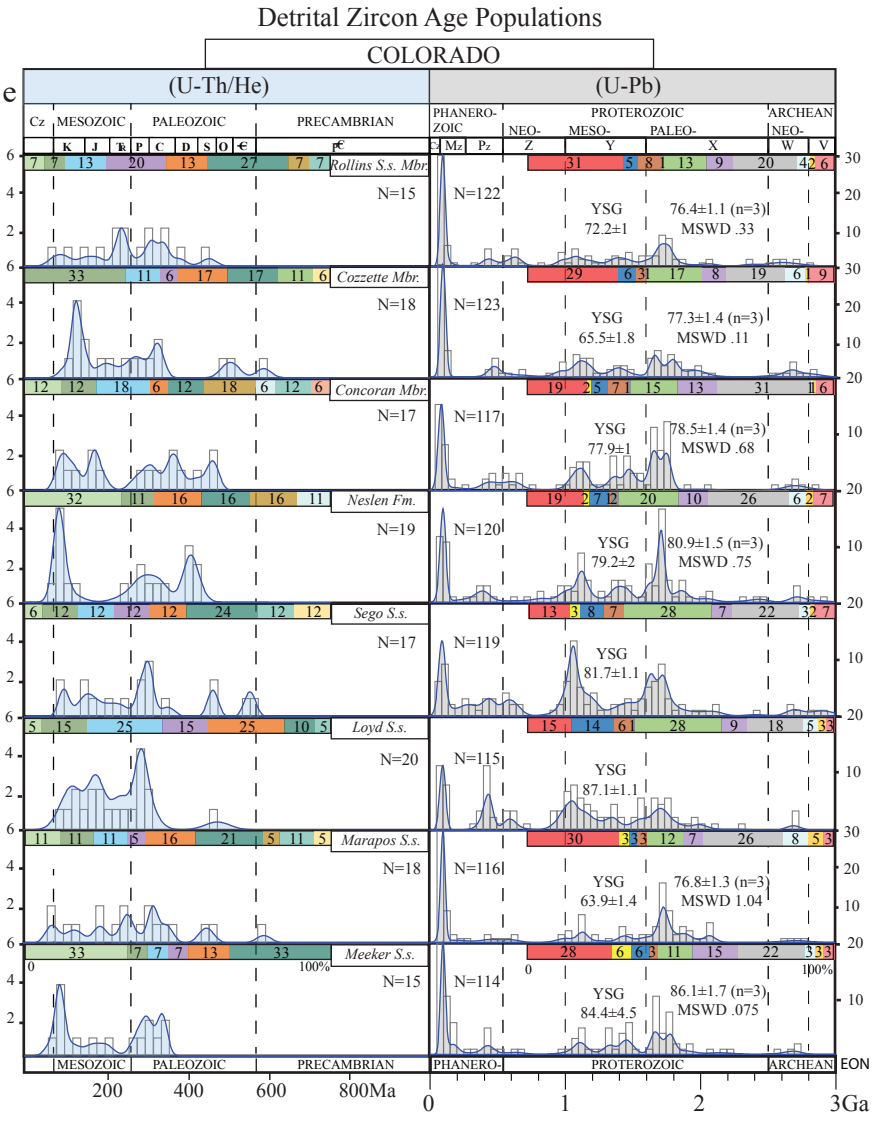

Detrital Zircon Age Populations
GREEN RIVER
(U-Th/He)
(U-Pb)
Bluecastle T.
N=23
N=113
67.6±1.8
MSWD .105
Castlegate S.s.
N=20
N=120
YSG
86.5±1.6
Desert Mbr.
N=21
N=121
YSG
79.5±1.2
Grassy Mbr.
N=19
N=105
YSG
91.3±1
Sunnyside Mbr.
N=21
N=122
YSG
85.2±1
W* Sunnyside Mbr.
N=18
N=119
YSG
77.9±4
W* Kenilworth Mbr.
N=18
N=119
82.1±1.3
MSWD .094
MESOZOIC
PALEOZOIC
PRECAMBRIAN
PHANERO-ZOIC
PROTEROZOIC
ARCHEAN
200
400
600
800Ma
0
1
2
3Ga

Figure 2.3d



DZHe period- percentage bar	
L. Cretaceous	66-100.5
E. Cretaceous	100.5-145
Jurassic	145-201.3
Triassic	201.3-252.17
Permian	252.17-298.9
Carboniferous	298.9-358.9
Devonian	358.9-419.2
Silurian	419.2-443.8
Ordovician	443.8-485.4
Cambrian	485.4-541
Ediacaran	541-635
Cryogenian	635-850
Tonian	850-1000Ma.

Period age ranges from International Stratigraphic Chart v2015/01 by Cohen, K.M. and others (2015)

DZ inferred sources -percentage bar	
Sevier age volcanics	60-155
Late Paleozoic- Jurassic Magmatic Arc	155-285
Appalachian Paleozoic plutons	285-510
Accreted peri-Gondwanan terranes	510-725
Uncertain-indeterminate origin	730-900
Grenville orogen and satellite plutons	905-1,300
Anorogenic Mesoproterozoic plutons	1,300-1,535
Yavapai-Mazatzal orogenic belt	1,535-1,810
Cratonic Paleoproterozoic belts	1,810-2,015
Northwest Laurentia (Wopmay orogen)	2,020-2,335
Archaean cratonic nucleus	2,420-3,500Ma

Inferred DZ sources (Dickinson and Gehrels (2010), table 1)

Figure 2.3e

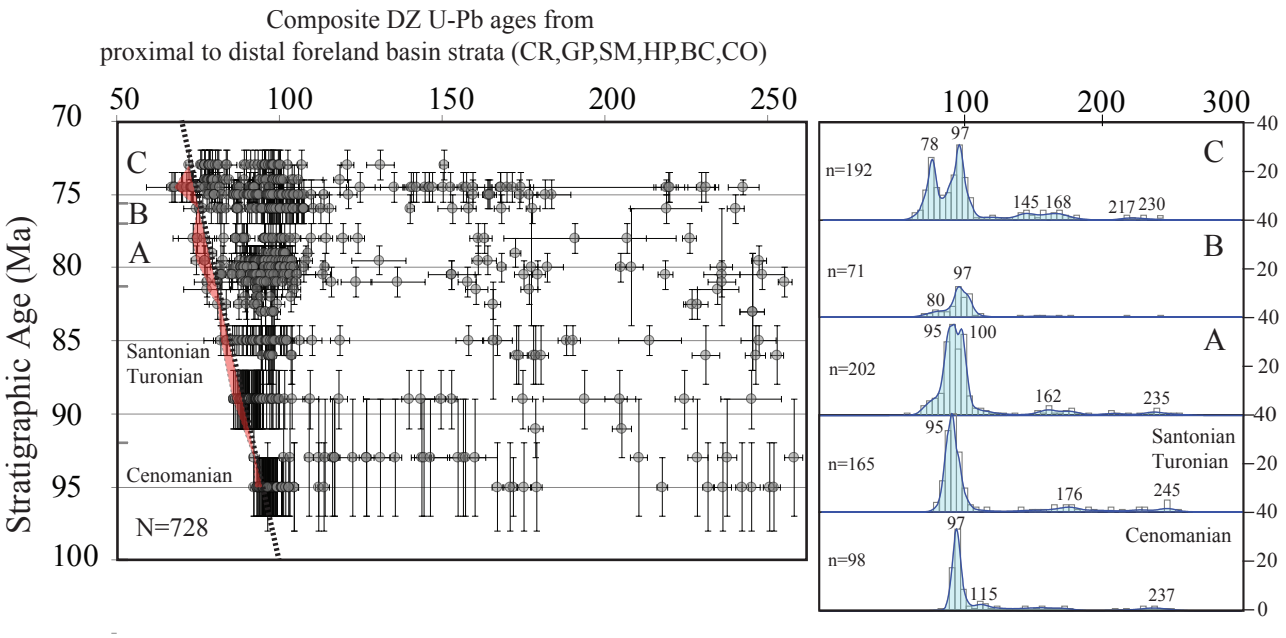


Figure 2.4. The graphs on the left compares the established Book Cliffs stratigraphic ages against the DZ U-Pb volcanic arc ages (Cordilleran and Sierran DZ U-Pb ages). The KDEs on the right are arranged by wedge or stratigraphic age and show the magmatic arc DZ U-Pb age components lying between 260-60 Ma.

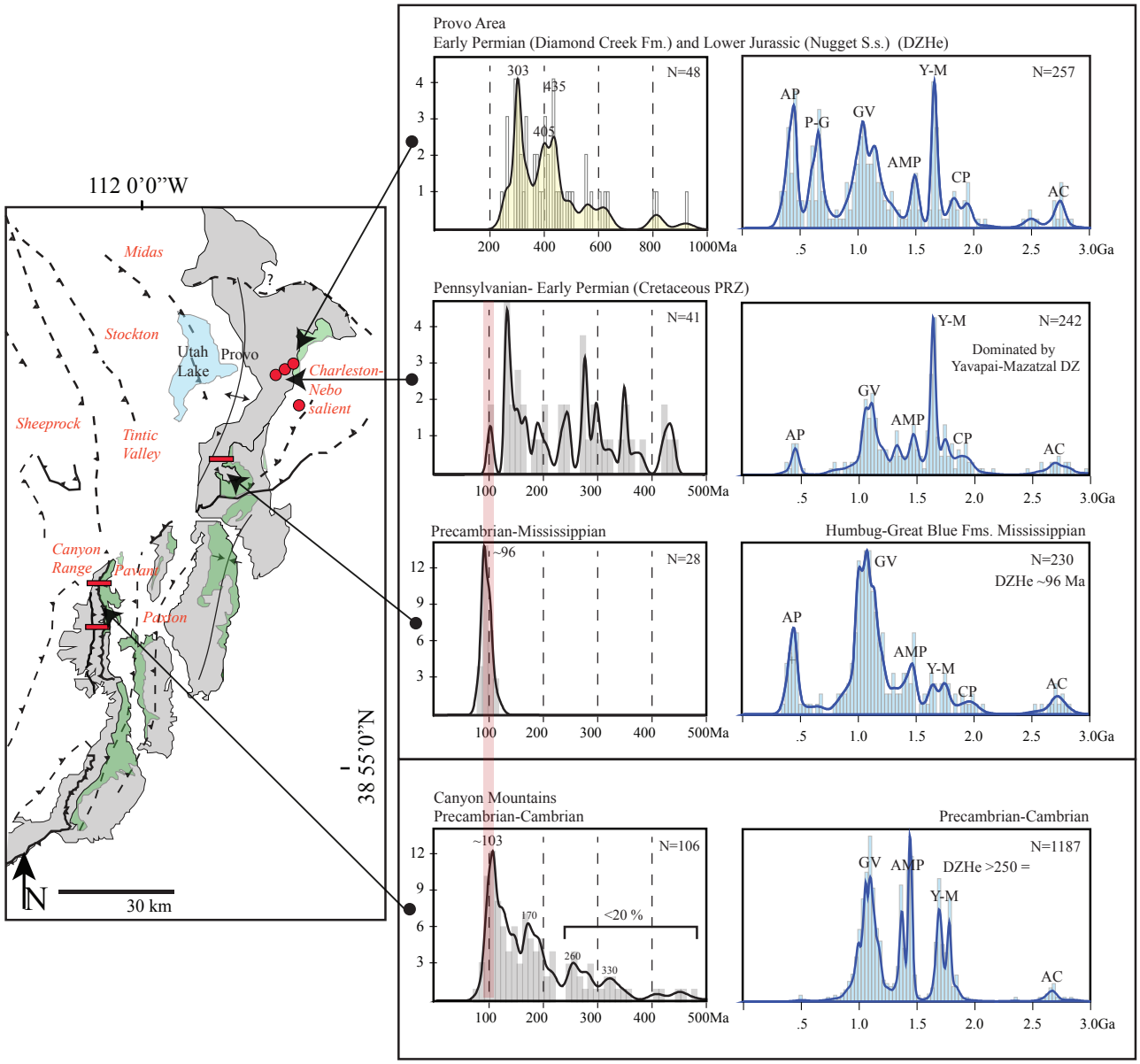


Figure 2.5. Sevier thrust sheet DZ and DZHe age populations and location (red dots and rectangles). Stratigraphic sections containing similar DZ and DZHe age populations were combined. The early Permian to Jurassic (yellow) KDEs indicates unreset DZHe ages. All other strata sample seems thermally influenced by Cenomanian cooling (pink bar). Upper Paleozoic-Mesozoic strata contain a higher frequency of Yavapai-Mazatzal DZ ages whereas the Precambrian-Lower Paleozoic strata are dominated by Grenville DZ ages. Appalachian Plutons DZ ages become dominant and Peri-Gondwana DZ ages appear visible for the first time in Jurassic strata. AP=Appalachian Plutons, P-G=Peri-Gondwana, GV=Grenville, AMP=Anorogenic Mesoproterozoic Plutons, Y-M =Yavapai Mazatzal, CP=cratonic Proterozoic belts, AC=Archean craton.

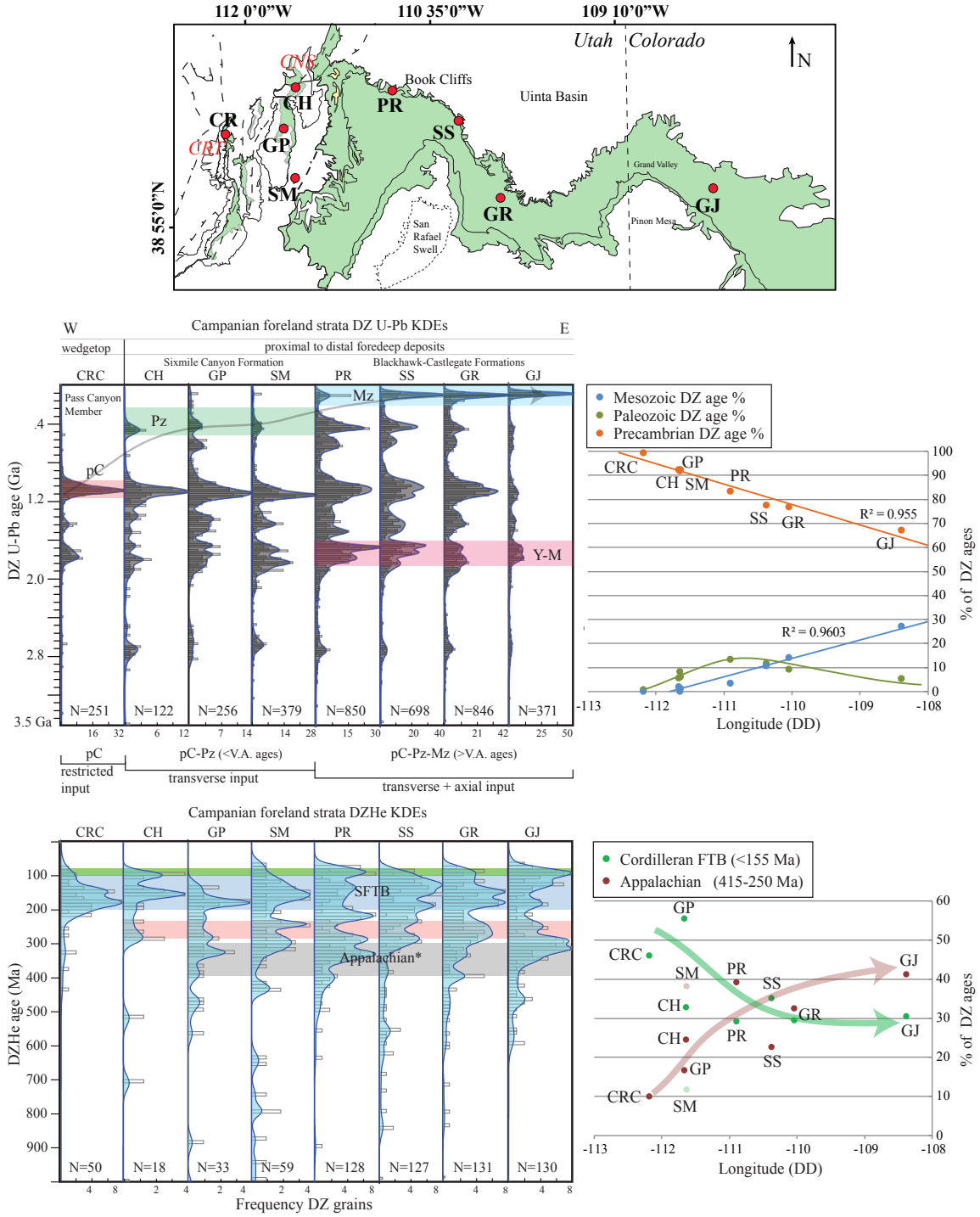


Figure 2.6. Composite Campanian DZ and DZHe age populations from proximal to distal portions of the Sevier foreland basin. Locations are shown in red on the upper most map. CR: Canyon Range Conglomerate, GP: Gunnison Plateau, SM: Sixmile Canyon, CH: Cedar Hills (Hop Creek), PR: Price River Canyon, SS: Sunnyside Canyon, GR: Green River, GJ: Grand Junction CO. The percentage of Precambrian, Paleozoic and Mesozoic DZ (U-Pb) ages are plot individually against longitude. Precambrian DZ ages decrease and Mesozoic DZ ages increase systematically down-depositional-dip. Similarly, Cordilleran DZHe cooling ages decreases and Appalachian DZHe cooling ages increase down-depositional-dip.

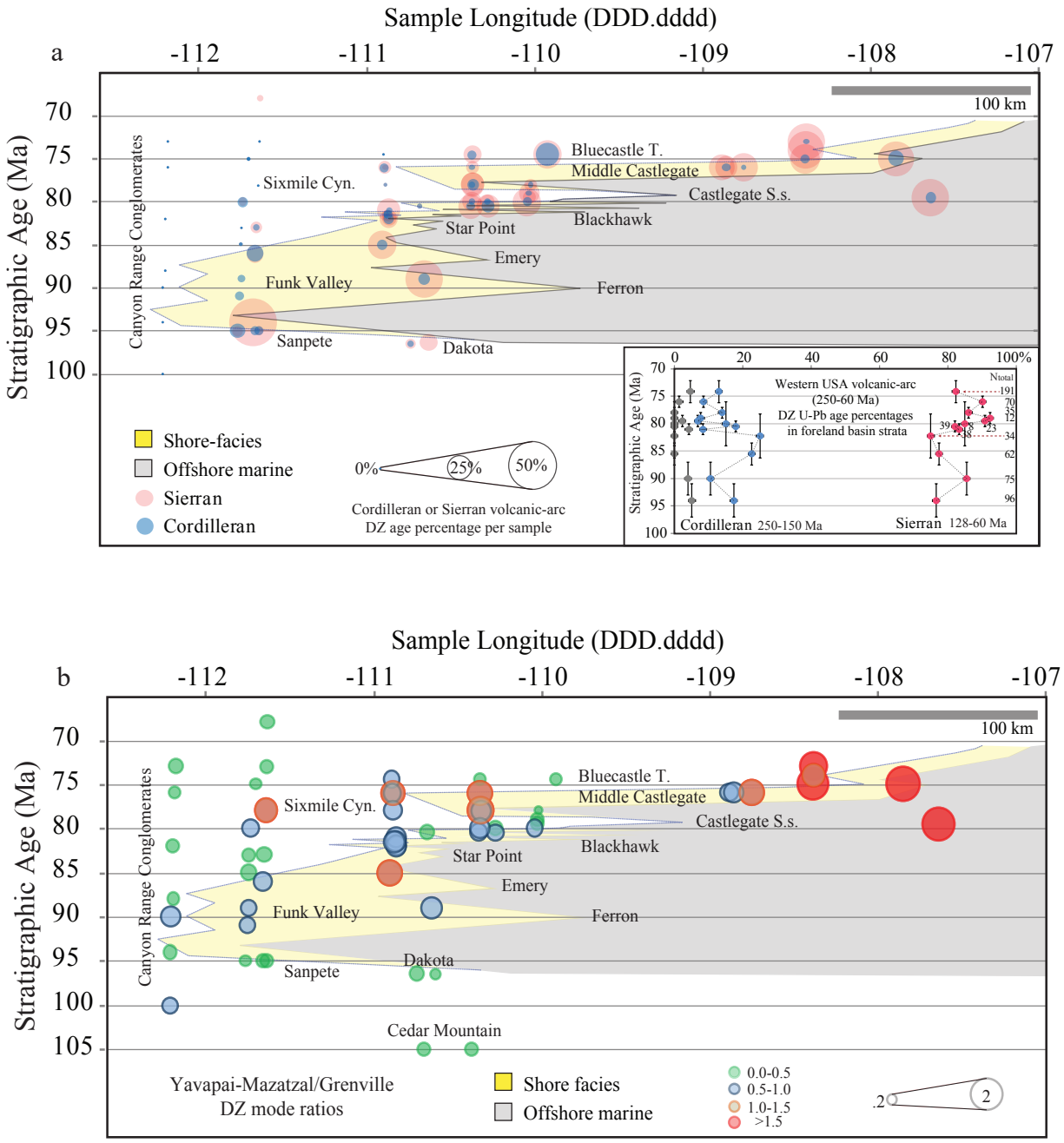


Figure 2.7. This figure is divided in two plots: a) the uppermost shows stratigraphic age vs sample longitude. The diameters of the circles increase as more Cordilleran (blue circles) or Sierra DZ U-Pb (pink circles) ages are present per population. A clear increase in Cordilleran and Sierra DZ ages is visible in shore facies deposits. b) This plot shows the spatial changes between Grenville and Yavapai-Mazatzal DZ U-Pb age ratio.

Youngest 3 DZHe ages from time-equivalent Book Cliffs foredeep strata (Lag Time plot)

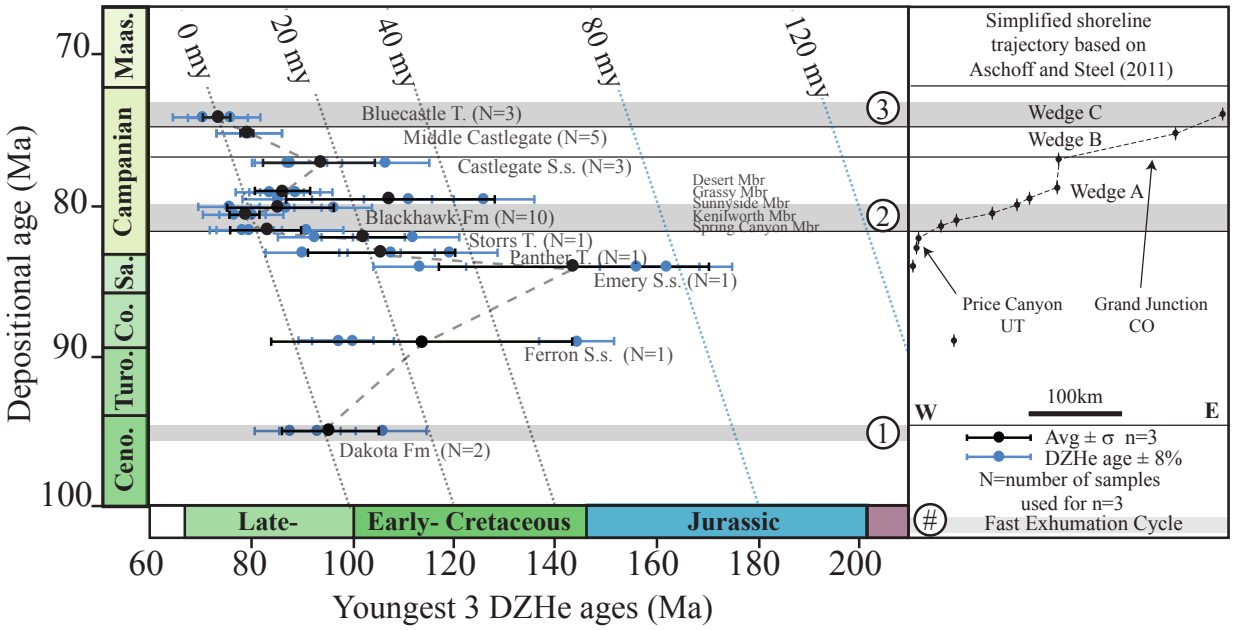


Figure 2.8. The youngest 3 DZHe cooling ages for each stratigraphic unit plotted against depositional age at a one-million-year stratigraphic resolution. The timing of each clastic wedge and its shoreline trajectory is shown for comparison. Clastic wedges A and C yielded rejuvenated DZHe cooling ages whereas the Ferron, Emery and Wedge B do not.

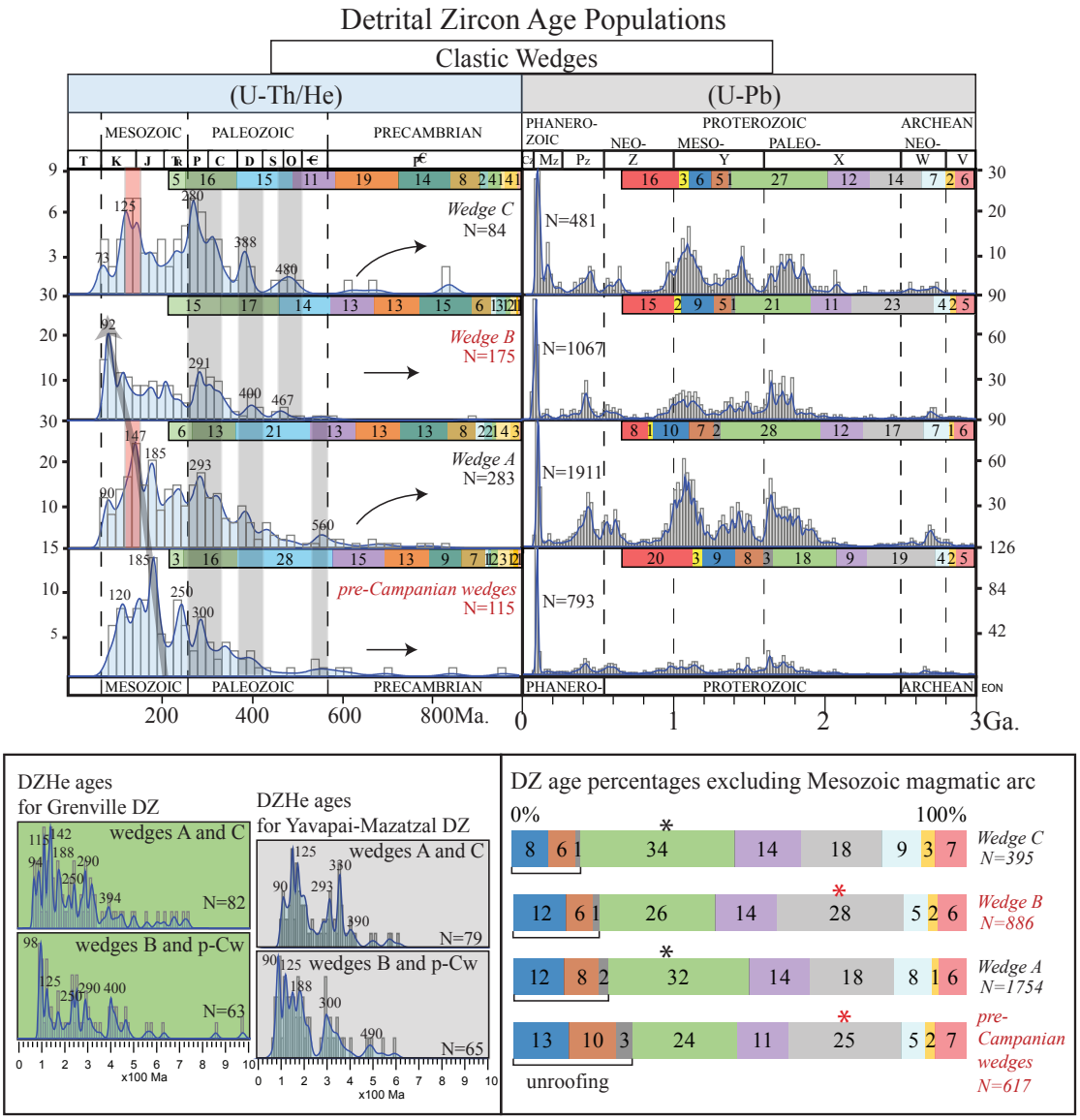


Figure 2.9. Composite DZ and DZHe age populations based on clastic wedges A, B, C, from Aschoff and Steel, [2011]. The percentage bars (lower right) exclude Cordilleran-Sierra arc ages to better show fluctuations in Grenville and Yavapai-Mazatzal DZ ages and up-section decrease in Paleozoic DZ ages over time.

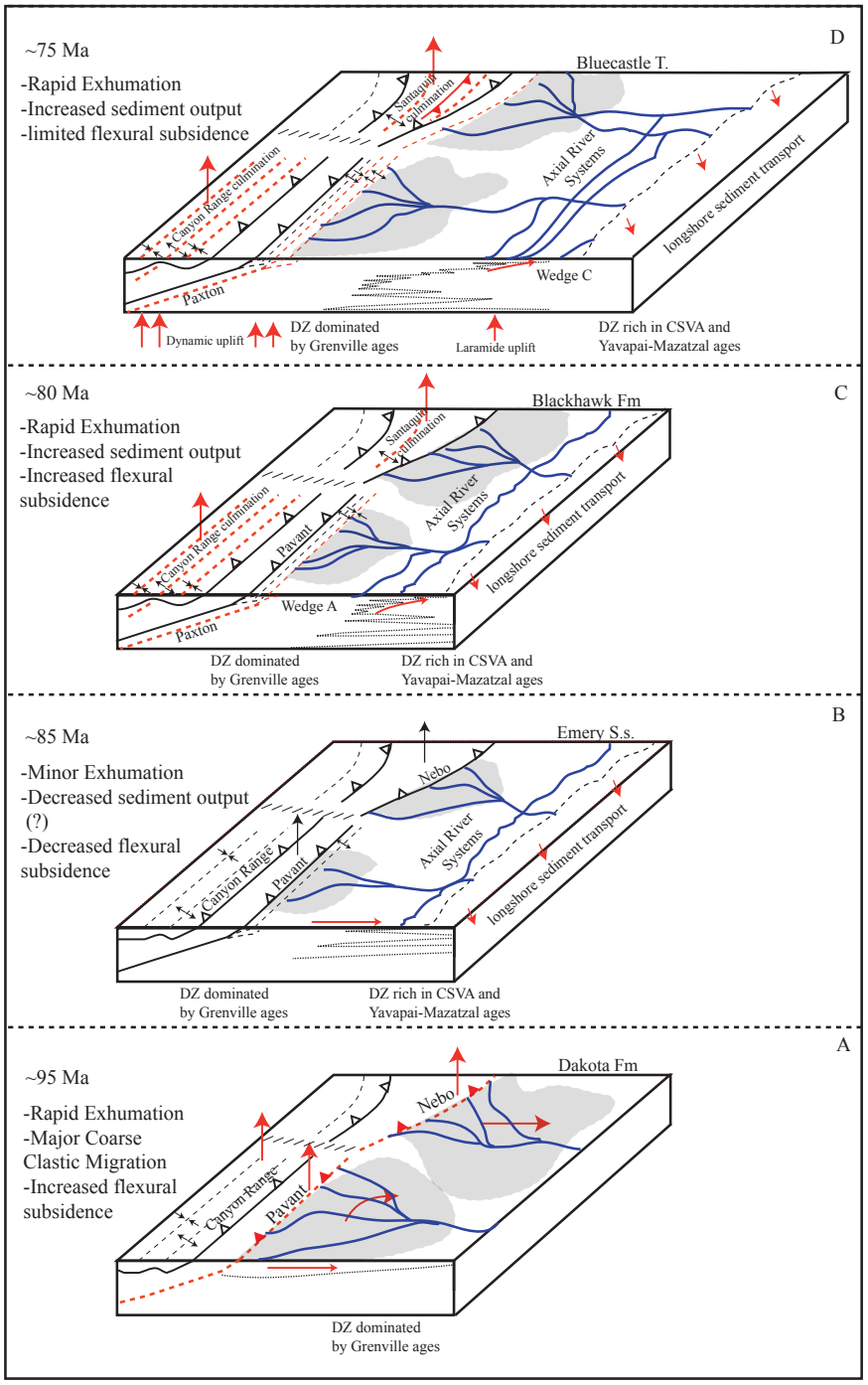


Figure 2.10. Schematic block diagram showing the relationship between hinterland deformation, sediment dispersal and shoreline trajectory in Late Cretaceous strata. a) Rapid exhumation and major sediment output overcomes flexural subsidence allowing for fast coarse clastic migration in the Cenomanian (Chapter 1). b) Minor deformation and flexural accommodation space is inferred from the lack of renew short lag time DZHe depositional ages and flat shoreline trajectory of the Emery Sandstones. A similar scenario is envisioned for the Ferron Sandstone and Wedge B. c) Major deformation and flexural accommodation space is inferred from short lag time DZHe depositional ages and uprising shoreline trajectory in the Blackhawk Formation. Hinterland deformation and rapid exhumation is likely to be localized in culminations and intensified by Paxton and Charleston thrusting and duplexing. d) Continue hinterland deformation and significant sediment output is inferred from short lag time DZHe depositional ages. Intrabasin Laramide deformation and dynamic uplift are as well likely mechanism modulating the extent of Campanian strata in conjunction with major hinterland deformation and exhumation.

Chapter Three: Coupling Between Magmatism, Retro-Arc Contraction, Foreland Basin Architecture And Plate Convergence: Evidence From Detrital Zircon Geo-Thermochronology In The Cordilleran Retroarc Basin

ABSTRACT

In Cordilleran orogenic systems, the temporal and causal linkages between retroarc deformation, voluminous magmatism and plate convergence have remained elusive, largely due to the lack of temporal resolution in reconstructing the retroarc deformational history, incomplete arc magmatic records, and uncertainties surrounding plate motion reconstructions and convergence rates. This study compiles high-density detrital zircon (DZ) U-Pb and (U-Th)/He (He) geo-thermochronometric data from Late Jurassic to Late Cretaceous Cordilleran Sevier foreland basin strata to investigate the temporal relationship between arc volcanism and cooling and exhumation in the the retroarc Cordilleran Sevier fold-and-thrust belt. The foreland basin DZ U-Pb ages record four major volcanic zircon generation events at ~165, 118, 97, and 77 Ma that agree in age with proposed large-volume magmatism in the arc. High-density DZHe age from the foreland document intervals of large-magnitude fold and thrust belt exhumation and variations in exhumational lag times and provide clear evidence for several episodes of retroarc cooling and tectonic unroofing at ~177, 149, 133, 121, 97, and 77 Ma. These data establish unequivocal synchronicity between major retroarc shortening and voluminous arc magmatism, challenging existing conceptual models that invoke temporal delays between retroarc shortening and voluminous arc magma generation. Furthermore, the temporal synchronicity in thrust belt activity and arc magmatism also appear to correlate with increases in plate convergence rates during the Late Jurassic-Cretaceous, implying that both arc magmatic fluxes and major retroarc shortening pulses are directly driven by plate boundary convergence rates. Hence, this study

proposes a new model where rate increases in subduction and/or overriding plate motion coevally control both retroarc contraction and arc magmatism cyclicity, not requiring retroarc shortening and underthrusting of continental lithosphere beneath the arc are not required to trigger arc magmatism in the Cordilleran orogenic system.

Keywords: Detrital zircon (U-Th)/(He-Pb) dating, Cordilleran retro-arc basin, plate convergence, arc-magmatism, Cordilleran tectonic cyclicity

INTRODUCTION

Temporal and geochemical constraints on major magmatic flare-ups, retroarc contraction, and basin evolution in the Late-Jurassic to Cretaceous western North America Cordilleran have provided a framework for conceptual models linking deep lithospheric processes to supracrustal deformation in Cordilleran type orogenic systems [e.g., *DeCelles*, 2004; *Ducea and Barton*, 2007; *DeCelles et al.*, 2009; *de Saint Blanquat et al.*, 2011]. However, the temporal and causal interplay between plate convergence, arc magmatism and retroarc deformational processes remain controversial. The leading model on Cordilleran orogenic systems proposes, based on timing constraints on retroarc shortening and arc magmatic isotopic signatures, that voluminous magmatic cycles in the arc appear to be modulated by episodes of lower continental lithospheric underthrusting causing subsequent increase in arc magmatism [*DeCelles et al.*, 2009]. As a result the Cordilleran arc magmatic production has been thought to follow a cyclical pattern of low and high fluxes of magmatism with primitive to more evolved geochemical signatures, controlled by lithospheric underthrusting [*Ducea and Barton*, 2007; *DeCelles et al.*, 2009]. In this model, duration of intervening magmatic lulls is controlled by the time required for lithosphere underthrusting to deliver sufficient melt-fertile lithosphere beneath the arc to trigger voluminous

magmatism after overcoming thermal inertia [e.g., *DeCelles et al.*, 2009; *Carrapa and DeCelles*, 2015]. This predicts that major retroarc shortening and coupled lithospheric underthrusting below the arc precede magmatic flare-ups and therefore major shortening and voluminous magmatism are temporally out-of-phase. Melting and voluminous magmatism in the arc over time lead to the formation of a dense restitic root (eclogitic root) that becomes gravitationally unstable and delaminates from the lower lithosphere, influencing in turn the angle of the subducting slab leading to changes in arc magmatism and space generation for renewed lithospheric underthrusting. Based on pulses in arc magmatism, it is estimated that the process spans between 20-55 myr [*Ducea and Saleeby*, 1998; *Ducea and Barton*, 2007]. The relationship between cyclical arc magmatism, retroarc shortening and plate convergence has been previously explored but no direct temporal relationship has been established [*Engebretson et al.*, 1984; 1985; *Pardo-Casas and Molnar*, 1987; *Silver et al.*, 1998; *DeCelles*, 2004]. However, these causative relationships between retro-arc shortening and underthrusting, plate convergence and pulses of arc magmatism are difficult to evaluate due in part the poor temporal resolution in retroarc shortening. Hence, this study utilizes new thermochronometric age constraints on different Sevier fold-and-thrust-belt (SFTB) thrust sheets and hundreds of single-grain double-dated detrital zircon (U-Th)/(He-Pb) ages from the Cordilleran foreland basin strata to estimate depositional lag times and high frequency DZHe age intervals indicative of rapid hinterland exhumation and thus timing of retroarc contraction.

The new direct constraints on the timing of retroarc deformation in the Sevier fold-and-thrust belt (SFTB), and detrital geo-thermochronology cooling evidence from the retroarc foreland basin indicates major crustal shortening and voluminous magmatism are chronologically in-phase in various Late Jurassic to Cretaceous periods particularly in the

Cenomanian-Turonian times. Although subject to large uncertainty, increases in rate of motion of the Farallon plate relative to North America as proposed by *Engebretson et al.* [1984] seem to as well increase temporally in-phase with cooling episodes and magma fluxes constrained by retroarc SFTB and foreland basin DZ U-Pb and DZHe ages. Therefore, we propose an alternative model in which plate convergence modulates retroarc shortening and magmatic fluxes characterized by relatively short temporal responses.

CORDILLERAN MAGMATIC ARC IN WESTERN USA

The timing and composition of Cordilleran arc magmas are of fundamental importance to understanding the tectonic elements involved and the temporal progression of processes leading to crustal genesis and observed magmatic pulses [e.g., *Gromet and Silver*, 1987; *Clift et al.*, 2009; *Acocella*, 2014]. The manifestation of Late Jurassic-Cretaceous Cordilleran arc magmatism in the western U.S.A. has been extensively documented in the Peninsula Range Batholith (PRB), the Sierra Nevada (SN), the Idaho Batholith (ID), and associate plutons [e.g., *Hamilton and Myers*, 1967; *DePaolo*, 1981; *Bateman*, 1983; *Hyndman*, 1983; *Saleeby and Busby-Spera*, 1992; *Armstrong and Ward*, 1993]. The PRB is a ~800-km-long batholith on the west coast of Baja and southern California that records two temporally, compositionally, and geochemically distinct episodes of magmatic emplacement [e.g., *Gastil*, 1975; *Gromet and Silver*, 1987; *Silver and Chappell*, 1988]. The western portion of the Peninsular Range batholith is characterized by a more primitive island-arc geochemical signature, gabbro to monzogranite compositions, and ages from 140-105 Ma with associated volcanic rocks dating from 125-118 Ma [*DePaolo*, 1981]. In contrast, the eastern portion, known as La Posta suite, is composed of tonalite and low-K granodiorites, ranging in ages from 105-80 Ma [*Silver and Chappell*, 1988].

Zircon U-Pb ages on La Posta suite narrows magmatic emplacement between ~99-92 Ma suggesting high-magma production rates on the order of 75-100 km^3/myr [*Kimbrough et al.*, 2001]. Similarly, the Sierra Nevada batholith records a systematic spatial west to east transition from primitive to more evolved in terms of both crustal isotopic signatures and composition [*DePaolo*, 1981]. Two major high-flux magmatic episodes took place at 160-150 Ma and 100-90 Ma, characterized by negative whole-rock εNd (+4 to <-10) and high $\delta^{18}O$ values (>6‰) indicative of major crustal influence [*Ducea*, 2001; *Ducea and Barton*, 2007; *Lackey et al.*, 2008; *DeCelles et al.*, 2009]. The apparent intrusive flux for the 100-90 Ma event in the Sierra Nevada batholith yields flux estimates >20,000 km^2/myr [*Ducea*, 2001]. In the Idaho Batholith, plutonic complexes subparallel to the Idaho shear zone constrains a portion of the Idaho batholith to mid-Cretaceous (~123-85 Ma) [*Manduca et al.*, 1993]. The magmatic fabric in tonalites and their alignment parallel to the Idaho Shear Zone has been interpret to represent syntectonic emplacement coeval with a major phase of deformation between ~110-90 Ma [*Manduca et al.*, 1993]. Chronological constraints on USA Cordilleran magmatism suggest a ~20-55 myr magmatic arc cyclicity with no apparent relation to fluxes or magma production rates [*DeCelles et al.*, 2009]. Cenomanian-Turonian (100-90 Ma) magmatism is recorded across the entire length of the Cordilleran arc, indicating large-scale arc magma and crustal growth, while the Late Jurassic-Early Cretaceous period appears to be characterized by sparse and spatially dispersed with minor arc magmatism [e.g., *DeCelles*, 2004]. However, large uncertainties cloud the timing of magma generation as the assessment of arc magma production is limited by surface exposures of plutonic rocks.

CORDILLERAN SEVIER FOLD AND THRUST BELT

Reconstructions of temporal and spatial evolution of progressive deformation in the Cordilleran retroarc orogenic system is an ongoing effort, although the North America Cordilleran orogeny is arguably one of the best studied in the world with extensive timing constraints on deformation [*DeCelles*, 2004: and references therein]. The Cordilleran orogenic system partitioned major contractional deformation between the Luning-Fencemaker, Central Nevada, Sevier fold-and-thrust belts (SFTB), and Laramide uplifts from the Late Jurassic to the Eocene [*DeCelles*, 2004]. It is estimated that the maximum cumulative shortening associated with late Mesozoic retroarc deformation reached ~350 km in central Utah [*DeCelles*, 2004], with more than 60% being accommodated by thin-skin dominated deformation in the SFTB. Cretaceous deformation in the retroarc SFTB, in the areas of interest, was accommodated by the Canyon Range, Pavant, Paxton, and Gunnison thrusts and duplexes in central Utah [*Mitra et al.*, 1994; *Mitra and Sussman*, 1997; *DeCelles*, 2004; *DeCelles and Coogan*, 2006] and by the Sheeprock, Tintic Valley, Midas, Nebo and Charleston thrusts and salient (CNS) in north-central Utah [*Mitra*, 1994; 1997; *Constenius et al.*, 2003; *Kwon and Mitra*, 2004]. The Sevier retroarc experienced the largest episodes of shortening during the late-Late Jurassic(?)-Early Cretaceous [e.g., *DeCelles*, 2004; *DeCelles and Coogan*, 2006]. Low-angle Precambrian quartzite megathrust sheets such as the Canyon Range and Sheeprock thrust sheets in north-central Utah, define the earliest and dominant deformational phase [e.g., *DeCelles*, 2004]. The Canyon Range and Pavant thrust and duplexes accommodated the largest fraction of shortening during the Early- and early-Late Cretaceous with estimates around ~118 and ~74 km, respectively [*DeCelles and Coogan*, 2006]. The Paxton and Gunnison deformational phases resulted in an additional ~30 km of shortening from the Turonian to early Paleocene times [*DeCelles and*

Coogan, 2006]. The early kinematic and chronological evolution of the north-central Utah SFTB (Sheeprock, Tintic Valley, Midas thrusts) has been reconstructed yet shortening estimates are not easily convey due the intense dissection of thrust sheets by Basin and Range extension and reactivation of thrust planes during progressive deformation [*Mitra*, 1994; 1997; *Mukul and Mitra*, 1998; *Kwon and Mitra*, 2004; *Guenthner et al.*, 2014]. Palinspastic restorations bracket Nebo and Charleston thrusts shortening to 35 and 50 km, respectively. These thrusts combined with duplexing in the Santaquin culmination are responsible for ~100 km of shortening in the CNS from the Cenomanian to Eocene [*Constenius et al.*, 2003]. Thermochronometric studies on the timing of both the Pavant and Nebo thrusts and associated deposits suggest synchronous exhumation (~95 Ma) during a phase of large magnitude shortening and exhumation in the SFTB (Chapter 1) [*Stockli et al.*, 2001; *Constenius et al.*, 2003].

NORTH AMERICA AND FARALLON PLATES CONVERGENCE RATES

Quantitative plate tectonic reconstructions have provided the framework to delineate linkages between plate convergence, continental deformation, and arc magmatism [*Engebretson et al.*, 1984; 1985]. The relative motions between the North America and Farallon plates were calculated by modeling their displacement relative to hotspots in the Pacific and Atlantic region, under the assumption that hotpots remain fixed with respect to one other,which is a subject of considerable examination [e.g., *Atwater and Stock*, 1998; *Norton*, 2000; *Koppers et al.*, 2001]. The convergence rate values from the Middle Jurassic to the Late Cretaceous (interval of interest) are shown in Figure 3.4. These values remain imprecise due to uncertainties and errors associated with tracking hotpot motion on the Pacific Plate, the lack of magnetic polarity reversals in the Cretaceous, wander between hotpots, and oceanic spreading plate boundaries

reconstructions. The uncertainties, errors and assumptions are described in detail by *Engebretson et al.* [1985].

CORDILLERAN RETROARC FORELAND BASIN

Crustal loading within the SFTB generated flexural subsidence and accommodation space, forming the Sevier retroarc foreland basin [e.g., *DeCelles and Giles*, 1996]. The foreland basin evolved in conjunction with the SFTB [e.g., *DeCelles*, 2004] and its detrital and stratigraphic record provides an invaluable archive of the progressive deformation and unroofing history of the orogenic hinterland and the magmatic arc, as well as the tectonic forces modulating basin architecture. The Cordilleran retroarc foreland basin stratigraphy is characterized by several shallowing upward cycles that progressively migrate eastward through time in concert with the SFTB deformational history [*Lawton*, 1983; *Liu et al.*, 2005]. Cycles of enhanced sediment dispersal, especially progradation of gravel-size clastic wedges, are manifested in the Neocomian Buckhorn Conglomerates [*Heller and Paola*, 1989] and the Cenomanian Dakota Formation [*Yingling and Heller*, 1992]. Other episodes of punctuated clastic progradation are manifested in the Coniacian Ferron S.s., Santonian Emery S.s., and Campanian Castlegate S.s. and Bluecastle Tongue [e.g., *Edwards et al.*, 2005; *Aschoff and Steel*, 2011b]. Although it is well known that the dynamic interaction between hinterland deformation, flexural subsidence, sediment supply, eustasy, and climate modulates facies distributions and stratigraphic stacking patterns, the magnitude of influence exerted by the retroarc hinterland on foreland basin architecture remains highly contested [e.g., *Heller et al.*, 1988; *Heller and Paola*, 1989; *Kamola and Huntoon*, 1995; *Houston et al.*, 2000; *DeCelles*, 2004; *Horton et al.*, 2004; *Aschoff and Steel*, 2011a].

DETRITAL GEO-THERMOCHRONOLOGY

Detrital zircon (DZ) U-Pb and (U-Th)/He (DZHe) dating methods are powerful tools to elucidate provenance in light of the crystallization and low-temperature thermal history of the source regions [e.g., *Rahl et al.*, 2003; *Reiners et al.*, 2005]. Numerous studies have utilized DZ U-Pb and DZHe provenance age constraints to reconstruct paleogeography, drainage evolution, unroofing histories, and arc-magma episodes [*Gehrels et al.*, 1995; *Rahl et al.*, 2003; *Dickinson and Gehrels*, 2008a; b; *Lawton et al.*, 2010; *Barth et al.*, 2013]. The DZ U-Pb age is attributed to zircon crystallization on plutonic or metamorphic terranes, while DZHe ages indicate the timing of cooling between and below ~180-140 ^{o}C thermal range [e.g., *Reiners et al.*, 2002].The integration of both dating methods in a single zircon grain (U-Th)/(He-Pb) can significantly improve provenance reconstructions and provides an unique way to explore the temporal linkages between deformation and sedimentation by facilitating the recognition between tectonic and volcanic cooling ages (first-cycle volcanics) which is a critical step to relating DZHe ages to exhumational cooling histories in the hinterland [e.g., *Saylor et al.*, 2012]. The difference between the depositional age and DZHe age, after excluding first-cycle volcanic DZ ages, is known as DZHe depositional lag time. DZHe depositional lag times can further elucidate episodes of cooling suggestive of deformation by studying the lag time age progression over depositional time. Short DZHe lag time ages, particularly DZHe ages indistinguishable from depositional age, indicate rapid exhumation and transfer of sediments to the foreland basin. The DZ U-Pb and DZHe ages provide an alternative method for reconstructing the hinterland deformational history.

SAMPLES AND ANALYTICAL ZIRCON (U-TH)/(HE-PB) METHODS

DZ geo-thermochronometric analyses were performed on ~60 samples from the Cordilleran foreland basin. High-density sampling was done on Upper Cretaceous Canyon Range Conglomerates, Indianola Group, Book Cliffs, and Dakota Formation strata. Samples from the Uppet Jurassic Morrison Formation, and Lower Cretaceous Buckhorn Conglomerate and Cedar Mountain Formation were added to provide a stratigraphically comprehensive Late Jurassic to Early Cretaceous Cordilleran foreland basin DZ record. The sample coordinate locations are given in the Appendix A: Table 1a. The DZ U-Pb and DZHe isotopic and age data, per sample, are in Tables 2a-c and 3a-c, Appendix section.

The zircon grains were obtained by standard mineral separation techniques including rock crushing and grinding, water table and heavy liquid concentration, and magnetic susceptibility separation. In-situ U-Pb LA-ICP-MS and (U-Th)/He dating analyses were performed at the University of Texas at Austin geo-thermochronology laboratory. Zircons were mounted on double-sided sticky tape on 1" acrylic discs for in-situ depth profile LA-ICP-MS U-Pb dating. The in-situ U-Pb dating procedure consisted on ablating a 30 μm spot for 30 seconds at energy settings of 4 mJ/cm^2 on the un-polished surface of zircon grains at random. We analyzed approximately 120 zircon grains per sample to achieve a 95% confidence that we incorporated DZ components representing more than 5% of the total population [*Vermeesch*, 2004]. Zircon ablation isotopic analyses were performed using a PhotonMachine Analyte G.2 Excimer laser and Element 2 ICP-MS. Zircons were interspersed with primary and secondary reference U-Pb standards GJ1 [*Jackson et al.*, 2004] and Pak1 (in-house zircon standard ~42 Ma from Pakistan). U-Pb data was reduced using Iolite software and VizualAge [*Paton et al.*, 2011; *Petrus and Kamber*, 2012]. Only DZ ages with a percentage of discordance <30% were included

in the detrital analysis (i.e. discordance defined as 1-(^{206}Pb/^{238}U age/^{207}Pb/^{206}Pb age)*100). Discordance percentages were not considered for ages younger than 500 Ma due limitations in common lead resolution in LA-ICP-MS analyses [e.g., *Gehrels*, 2011]. The ^{206}Pb/^{238}U ages were chosen over ^{206}Pb/^{207}Pb when < 1.2 Ga to improve DZ age precision [*Gehrels et al.*, 2008]. DZ U-Pb age depth profiling allowed screening for high uranium and low lead concentrations in outer rims indicative of lead loss.

Zircons grains for (U-Th)/He double dating were selected as a function of a sample's DZ U-Pb age spectrum to represent all major age components. DZ U-Pb ages with a >10% discordance and geometrically inadequate for He analysis, such as zircons <60 μm, highly asymmetric, broken, fracture or rich in inclusions, were excluded. Zircon grains wrapped in 1mm platinum capsules were degassed inside ultra-high vacuum chamber by diode laser heating at temperatures of ~1300 °C. The extracted gas was spiked with ^{3}He for isotope dilution, concentrated and purified using a cryogenic trap and a cold Zr-alloy getter system and analyzed using a Blazers Prisma QMS-200 quadrupole mass-spectrometer. Laser degassing is repeated until ^{4}He yields were <1% of the total extracted ^{4}He. All zircons were individually unpacked from the platinum packages and dissolved with HF, HNO_3, HCl acids and an isotopically enriched ^{235}U/^{238}U-^{230}Th/^{232}Th-^{149}Sm/^{147}Sm tracer in high-pressure Parr dissolution vessels. The solutions were analyzed on a Thermo Element2 ICP-MS. All reported uncertainties for ZHe are 8% (SE) based on UT laboratory Fish Canyon Tuff reproducibility.

RETROARC EXHUMATION AND ARC-MAGMATISM AS CONSTRAINED BY DZ AGES IN THE CORDILLERAN FORELAND BASIN

This study compiled double dated (U-Th)/(He-Pb) zircons and DZ U-Pb ages from ~60 Cordilleran foreland basin samples in order to establish a high density detrital zircon geo-thermochronometric data set in the retroarc Cordilleran foreland basin, representative of retroarc exhumational cooling and arc-magmatism.Cordilleran foreland basin DZ constraints on tectonic cooling (exhumation) and arc-magmatism were achieved using two different data evaluation approaches.

The first approach to constrain magmatic and tectonic cooling episodes involves compiling all DZ ages from every sample, regardless of their stratigraphic age, to identify outstanding modes suggestive of Cordilleran-Sierran volcanic magmatism (DZ U-Pb) or exhumational cooling from the retroarc thrust belt (DZHe ages). Stratigraphic units younger than Campanian are not examined in this study. Due the large range of DZ U-Pb and DZHe ages encountered in Cordilleran foreland basin strata, we only examined DZHe and DZ U-Pb ages in the time interval proposed for contractional deformation and arc magmatism associated with Late Jurassic to Late Cretaceous Cordilleran orogeny ~200-70 Ma for this evaluation method, (Figure 3.1). All DZ U-Pb ages younger than 200 Ma were included in the composite Cordilleran foreland basin DZ U-Pb population (Figure 3.1a). To examine exhumational cooling ages from the retroarc Sevier fold-and-thrust belt, only non-volcanic DZHe ages were included in the compiled DZHe population (Figure 3.1b). The combined ~60 Cordilleran foreland basin samples allow the construction of two major populations, one containing 779 DZ U-Pb volcanic ages and another 453 DZHe thrust-related cooling ages.

The DZ U-Pb population exhibits four distinctive modes at ~165, 118, 97, 77 Ma and consists of mostly Cretaceous DZ U-Pb ages: Cenomanian (25%), Albian (18%), Turonian (13%), Campanian (12%), Aptian (8%), Coniacian, (7%) and Santonian (3%) (Figure 3.1a). The Jurassic DZ U-Pb in total constitutes only 14% of the sampled population with the most frequent ages between Bathonian (2%) and Callovian (3%). These DZ U-Pb age modes agree chronologically with well recognized pulses of arc magmatism, such as La Posta ~99-92 Ma, and both Sierran Nevada magmatic fluxes 160-150 Ma and 100-90 Ma, and even may offer insights into not yet constrained, exposed, or preserved arc magma fluxes considering the large sample numbers and stratigraphic time interval sampled.

The DZHe exhumational cooling ages, after excluding first-cycle volcanic ages, show six high-frequency intervals (modes), that compose 70% of the sampled 200-70 Ma DZHe population: ranging between 190-165 Ma (26%), 155-140 Ma (17%), 135-130 Ma (5%), 125-115 Ma (8%), 100-85 Ma (12%), and 80-75 Ma (2%), added. The observed peaks are at ~177, 149, 133, 121, 97, 77 Ma (Figure 3.1b). The age ranges were determined by identifying large contrasts in frequency using a histogram with an arbitrary bin width of 5 Ma. This high-frequency DZHe age intervals are presume to represent episodes of hinterland deformation due to the expected large generation of "equal" age zircons during a rapid cooling/exhumation events in contrast to slow exhumational cooling expected to generate zircons with a wider range of thermochronometric ages in a relative smaller rock volume [e.g., *Spotila*, 2005; *Stockli*, 2005].

Although the limitations inherent to using DZ U-Pb and DZHe ages as a proxy for magmatic or cooling-exhumation episodes can be contested by arguments evoking zircon fertility, provenance and spatial and temporal bias [e.g., *Moecher and Samson*, 2006; *Dickinson*, 2008], the large zircon data density and foreland interval sampled yield magmatic arc and retro-

arc tectonic cooling constraints descriptive of the Cretaceous Cordilleran orogenic system. This is supported by (1) the strong temporal overlap between DZ age modes with proposed pulses and lulls in magmatism dated by former studies in the SN and PRB batholiths [*DePaolo*, 1981; *Ducea*, 2001; *Kimbrough et al.*, 2001; *Ducea and Barton*, 2007] and (2) the overlapping modal distribution of DZHe ages with cooling/exhumation age constraints on the Nebo and Pavant thrusts (Chapter 1) [*Constenius et al.*, 2003] and Mount Timpanogos and Midas thrusts [*Guenthner et al.*, 2014].

To provide a mean of standard comparison other than observable contrast in DZ age components, the DZHe and DZ U-Pb age populations were de-convoluted (un-mixed) using Isoplot 4 [*Ludwig*, 2003] and Gaussian peak ages were compared. Six components were specified *a priori* in both DZHe and DZ U-Pb age populations based on the observed DZHe age modes (Figure 3.1). The Isoplot Sambridge and Compston algorithm de-convoluted six components that not only agree with our previous observation, but show a remarkable resemblance in ages between both DZ U-Pb and DZHe age populations. Isoplot peak ages for DZ U-Pb are 82, 97, 115, 145, 163, 176 Ma and for DZHe ages are 75, 93, 115, 134, 153, 182 Ma (Figure 3.2). DZHe exhumational cooling and DZ U-Pb volcanic peak ages only deviate between 11-1 myr (Figure 3.2), well within analytical uncertainty of both dating techniques, suggesting a strong temporal overlap.

The second evaluation approach involves compiling exclusively correlative strata and time equivalent DZHe data sets to define episodes of exhumational cooling by DZHe lag time ages (Figure 3.3). The youngest three DZHe ages for each sample were plotted against stratigraphic age to establish the apparent minimum exhumational to depositional lag time ages (Figure 3.3). Short DZHe depositional lag times helps define three episodes of rapid exhumation.

The oldest episode of rapid exhumation recorded in the foreland basin strata is preserved in the Cenomanian Dakota Fm. and Lower Canyon Range Conglomerate (~95 Ma) and the two other in the Campanian Blackhawk Fm. (~79 Ma) and Bluecastle Tongue (~75 Ma) (Chapters 1 and 2).

DISCUSSION

Temporal linkage between arc magmatism, retroarc contraction, and plate convergence

New foreland basin geo-thermochronometric ages and Cordilleran retroarc (SFTB) constraints on the timing of shortening and exhumation history of the Cordilleran orogenic belt present the opportunity to evaluate the influence of plate convergence and major retroarc shortening on magma production cyclicity and foreland basin evolution and to elucidate the temporal and causal interplay between these processes. The temporal coincidence between the Farallon and North America plate convergence rates (Figure 3.4), episodes of retroarc shortening (deduced from exhumational DZHe cooling ages) and increases in magma production raises the prospect for a potential causal relationship (Figure 3.3).

The most compelling evidence for their synchronicity is manifested in the Cenomanian-Turonian time interval. Multiple lines of evidence, such as foreland basin DZHe age frequency, Cenomanian short depositional lag times and low-temperature constraints on the Nebo and Pavant thrust sheets, suggest major shortening in the Cenomanian-Turonian retroarc (Chapter 1). Other studies have constrained thrust deformation from Montana to Californian to be of equivalent age for example the Meade-Laketown, Cabin, Contact-Wilson, Cliffs-Red Spring, Keaney-Mollusk Mine, Muddy Mountain Glendale, Keystone, Blue Mtn and Nopah Peak-Wheeler Pass thrusts [e.g., *Fleck and Carr*, 1990; *Coogan*, 1992; *DeCelles et al.*, 1993; *Royse Jr*, 1993; *Walker et al.*, 1995; *Wells*, 1997; *DeCelles*, 2004]. These faults comprise a 1000 km long

active deformation belt along the SFTB frontal trace in the Cenomanian-Turonian times, and appear to temporally overlap with high-volume magmatism in the PRB, SN, and likely the ID. Both the retroarc and forearc foreland basin were influenced by significant uplift and erosion in the arc and orogenic hinterland, during the same time, as indicated by enhanced coarse clastic sedimentation recorded in the Cenomanian Valle Group [*Kimbrough et al.*, 2001] and Dakota Formation [*Yingling and Heller*, 1992]. Coeval with rapid retroarc deformation, seafloor spreading rates in the North Atlantic increased from 12-16 to 30 mm/yr (~95 Ma) [*Sclater et al.*, 1981; *Müller et al.*, 1997], and convergence rates between the Farallon and North America plate increase from ~55 to 105mm/yr (~100 Ma), indicating an episode of major tectonic coupling and likely acceleration in westward translation of North American plate. Both the DZ U-Pb and DZHe ages register significant modes indicating retroarc cooling and major arc-volcanism. The Isoplot Gaussian peak age comparison between both modes only diverges by 5 m.y., well within the uncertainties of the dating techniques (Figure 3.2).

The overlap in DZ U-Pb and DZHe age components additionally points to other potential synchronous events between magmatism and exhumational cooling in the Late Jurassic-Early Cretaceous and Campanian. DZHe cooling modes for Late Jurassic-Early Cretaceous DZHe exhumational cooling ages (~155-140 Ma) coincide with the establishment of (1) eastward Farallon subduction and formation of a continental arc, (2) the Cordilleran fold-and-thrust-belt (Luning-Fancemaker thrust) and foreland basin, and (3) early voluminous arc magmatism in the SN (160-150Ma). Similarly, DZ U-Pb and DZHe Campanian modes overlapped in age and are closely followed once more by an increase in rate of plate convergence, supporting the temporal synchronicity between retroarc shortening, arc magmatism and increase in plate convergence (Figure 3.4). These tectonic and magmatic events likely influenced major Campanian

depositional hiatuses, compositional and architectural changes in the Cordillera foreland basin [e.g., *Fouch et al.*, 1983; *Lawton*, 1986b; *Robinson and Slingerland*, 1998; *Horton et al.*, 2004]. For example, in the Book Cliffs Utah, the middle Campanian Castlegate S.s. (~78 Ma), trails a 3 myr depositional hiatus and preserves an abrupt depositional facies shift relative to the underlying Blackhawk Formation [e.g., *Robinson and Slingerland*, 1998; *Aschoff and Steel*, 2011a]. Furthermore, a major increase in quartz content proximal and distal deposits of the Castlegate Formation has been linked to internal deformation in the CNS and exhumation of Precambrian-Cambrian strata by Paxton deformation [*Lawton*, 1986a; *Horton et al.*, 2004]. DZHe cooling ages from Campanian strata, including the Sixmile Canyon, Blackhawk, and Castlegate Formations show very short lag times and support major syn-depositional deformation (Chapters 1 and 2) (Figure 3.3).

These new geo-thermochronometric data unequivocally show a temporal coincidence between arc magmatism and retroarc shortening, challenging the notion shortening should precede major arc magma generation suggesting a revision on the temporal responses between processes, such as magmatism, retroarc contraction and plate convergence involved in Cordilleran orogenic systems. The apparent synchronicity in response between the apparent increased subduction (convergence rate), retroarc shortening, and magma pulses during the Late Jurassic, Aptian, Cenomanian-Turonian and Campanian invoke significant direct coupling between the subducting slab and overriding continental lithosphere. Interplate coupling between the subducting slab and overriding plate likely increases during surges in convergence rate. Contraction in the retroarc has been largely associated with subducting slab dynamics exerting a primary control on upper-plate strain distribution over time [e.g., *Lallemand et al.,* 2005] and thus is no surprising it can exert a major control on timing of deformation.

Linkages between plate convergence rates and crustal deformation have been proposed in the Andes of South America, a modern analogue for the Cordilleran system [e.g., *Pardo-Casas and Molnar*, 1987; *Silver et al.*, 1998]. Amid the apparent in-phase response between plate convergence, arc magmatism and shortening and hence the conflict with existing Cordilleran models linking magmatism and retroarc deformation, this study proposes that increases in subduction and/or overriding plate motion control both retroarc contraction and arc-magmatism cyclicity. Increases in subduction prompt magmatic pulses by enhanced flux melting as larger volumes of oceanic slab and associated sediments enter the mantle wedge during episodes of accelerated convergence. Thermal perturbation by isotherm relaxation in contractional settings, magmatic underplating and radiogenic heat may additionally drive increased magma generation [*Brown*, 2007: and references therein].

Isotopic compositional arguments against subduction-driven melting as the major mechanism for magma fluxes could be made in light of the expected isotopic ratios in primitive magmas and the documented high δ18O and low εNd isotopic signatures suggestive of significant crustal influence. The current Cordilleran unifying model suggested in part lithospheric underthrusting melting to explain the evolved $\delta^{18}O$ and εNd isotopic signature of Sierran arc plutons [*Ducea*, 2001; *Ducea and Barton*, 2007; *DeCelles et al.*, 2009]. However, it seems equally plausible that increases in subduction-driven melt generation would lead to increased underplating and re-melting of the continental arc crust and host rock causing significant magma differentiation [*Eiler*, 2001]. A significant portion of these arc magmas likely intruded thick deep-to-shallow marine Precambrian to Mesozoic strata, assimilating host rock with $\delta^{18}O$ isotopic compositions significantly higher (e.g., Phanerozoic oceanic carbonate sediments (25-32‰), siliceous oozes (35- 42‰), and pelagic clays (15-25‰) $\delta^{18}O$ [*Kolodny and*

Epstein, 1976; *Arthur et al.*, 1982]) than Precambrian cratonic North American basement values (average ~10‰ $\delta^{18}O$) [e.g., *Silver and Chappell*, 1988; *Ducea and Barton*, 2007]. The anomalously high $\delta^{18}O$ values could therefore be explained by magma assimilation of enriched $\delta^{18}O$ host rock. Similarly, crustal contamination during voluminous magmatism may explain observed negative εNd values. Thereby a combination of factors such as host rock assimilation, remelting, and magma mixing during voluminous magmatic underplating and emplacement into the Cordilleran continental arc can explain the evolved isotopic compositions of Sierran Nevada-Peninsula Range arc plutons and their $\delta^{18}O$ and εNd values.

While DZHe age modes, suggestive of rapid retroarc exhumation, appear to temporally coincide with surges in convergence rates, no temporal correlation between voluminous magmatism and DZHe cooling ages is evident for the significant surge in convergence rate proposed at ~133 Ma (Figure 3.4). This suggests that either the comparison does not always hold true or points to an incomplete magmatic record or other poorly constrained processes affecting convergent margin. Recent in-situ zircon U-Pb trace element analyses from rhyolites of the Mineral King pendant of the Sierran Nevada batholith have recently documented magmatism within the western margin of North America during a period of relative magmatic quiescence [*Klemetti et al.*, 2014]. Zircon ages from these previously thought to be Triassic plutonic rocks in the Sierran Nevada yield ages of 134-136 Ma [*Klemetti et al.*, 2014], agreeing with the ~133 Ma DZHe cooling age mode (Figure 3.4). Furthermore, their whole-rock $\delta^{18}O$ composition (~9‰) opposes the notion that magmatic "lulls" are characterized by production of arc magmas with less crustal influence [*Klemetti et al.*, 2014].

CONCLUSIONS

The multi-sample composite DZ U-Pb (n=770) and DZHe (n=450) age modal distributions from Jurassic-Cretaceous ages provides an unprecedented detrital archive of the magmatic arc evolution and retroarc Cordilleran fold-and-thrust belt cooling ages that is supported by geochronometric constraints on magmatic fluxes in the Cordilleran-Sierran arc, and shortening episodes in the Sevier retroarc fold-and-thrust belt. Although subject to large uncertainty, increases in plate convergence rates, as constrained by *Engebretson et al.* [1984], appear to time-wise mimic retroarc fold-and-thrust belt cooling pulses and voluminous arc magmatism (Figure 3.4). Major architectural changes in the foreland basin in the Early Cretaceous, Cenomanian, and Campanian coincide with major exhumational/cooling episodes that can be correlated with coeval plate convergence surges and magmatism.

The synchronicity between retroarc shortening, major arc magmatism, foreland basin sediment dispersion, and plate convergence is best documented in the Cenomanian period. DZHe age frequency, short depositional lag time ages, and thermochonometric constraints in the Nebo and Pavant thrusts, in north-central Utah, record rapid Cenomanian exhumation (requiring major retro-arc shortening) synchronous with Cenomanian-Turonian (~100-90 Ma) high-flux magmatism in the Sierran Nevada-Peninsular Ranges arc. Moreover, time constraints on active deformation along other portions of the SFTB seem to corroborate wholesale shortening during Cenomanian-Turonian [e.g., *Fleck and Carr*, 1990; *Coogan*, 1992; *DeCelles et al.*, 1993; *Royse Jr*, 1993; *Walker et al.*, 1995; *Wells*, 1997; *Constenius et al.*, 2003; *DeCelles*, 2004]. Relative plate motion reconstruction models have suggested a significant increase in relative plate convergence during this period [*Engebretson et al.*, 1985]. At the same time, punctuated coarse clastic sediment dispersion was recorded in the Dakota Formation foreland basin strata.

The established synchronicity between both major retroarc shortening and high volume magmatism challenges conceptual models requiring a temporal delay (>20 Myrs) between retroarc shortening and voluminous arc magma generation [e.g., *DeCelles et al.*, 2009; *Carrapa and DeCelles*, 2015]. The cyclical changes in timing of magmatic arc fluxes and pulses of major retroarc shortening here are theorize to reflect changes in plate convergence rates due their combined temporal overlaps. This implies major magma generation in Cordilleran systems is modulated predominantly by subduction-driven melting instead of lithospheric underthrusting. Apparent high magma fluxes and evolved isotopic compositions can be explained by significant crustal contamination and do not necessarily signal upper-plate lithospheric underthrusting of melt-fertile crust.

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FIGURES

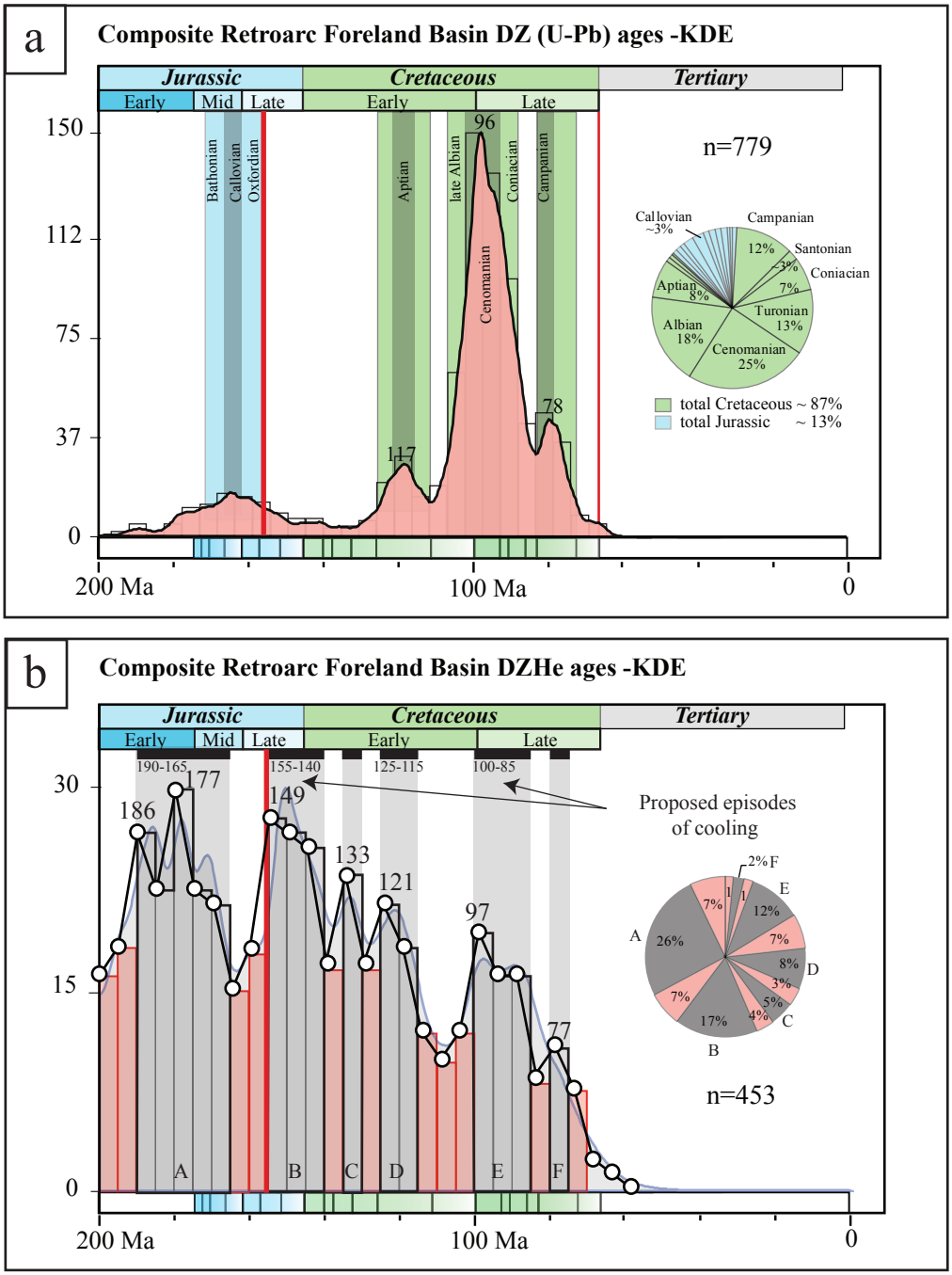
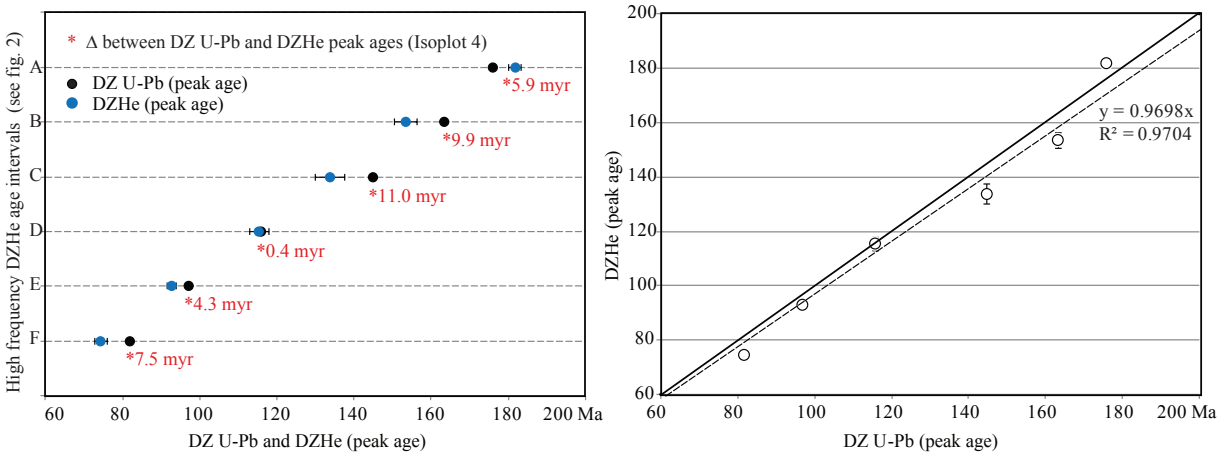


Figure 3.1. a) Composite DZ (U-Pb) population from foreland basin strata. The DZ age modal distributions are accompanied by columns to better show age. The pie diagram shows what percentage of DZ ages falls within Jurassic and Cretaceous ages. b) DZHe age population after excluding volcanic ages. Bin size is 5 myr and bandwidth is 10 myr. Various modes are recognizable and color coded gray. The duration in myrs is shown in the black rectangles below the time scale bar. Gray bars depict what we propose are cooling episodes associated with Cordilleran deformation and cooling. The red line indicates the timing of cohesive Cordillera orogenic system development (~155 Ma).



Unmix multicomponent data using Gaussian deconvolution software Isoplot 4 (trial ages for 6 age components)

Peak zircon U-Pb ages			
Age	±2s	fraction	±2s
81.861	0.13	0.21	0.03
97.02	0.067	0.53	0.05
115.832	0.18	0.12	0.02
144.84	0.52	0.04	0.01
163.34	0.33	0.06	0.02
175.91	0.41	0.04	---
relative misfit = 18029.620			

DZ U-Pb peak ages

Sigma-Rho Matrix DZ U-Pb Ages											
	f1	f2	f3	f4	f5	t1	t2	t3	t4	t5	t6
f1	0.017	-0.007	0	0	0	0.053	0.034	0.001	0	0	0
f2	-0.007	0.026	-0.004	0	0	-0.034	-0.02	0.005	0	0	0
f3	0	-0.004	0.012	-0.006	0	-0.001	-0.005	-0.009	0.007	0	0
f4	0	0	-0.006	0.007	-0.014	0	0	-0.005	0.01	0.017	0
f5	0	0	0	-0.014	0.009	0	0	0	-0.017	0.005	0.019
t1	0.053	-0.034	-0.001	0	0	0.0666	0.19	0.004	0	0	0
t2	0.034	-0.02	-0.005	0	0	0.19	0.0335	0.021	0	0	0
t3	0.001	0.005	-0.009	-0.005	0	0.004	0.021	0.0898	0.01	0	0
t4	0	0	0.007	0.01	-0.017	0	0	0.01	0.258	0.032	0.001
t5	0	0	0	0.017	0.005	0	0	0	0.032	0.166	0.042
t6	0	0	0	0	0.019	0	0	0	0.001	0.042	0.203

Peak zircon DZHe ages			
Age	±2s	fraction	±2s
74.4	1.5	0.05	0.02
92.76	1.3	0.14	0.04
115.4	2.5	0.13	0.04
133.8	3.8	0.16	0.04
153.4	2.9	0.22	0.05
181.78	1.6	0.31	---
relative misfit = 0.178			

DZHe peak ages *Non-Volcanic*

Sigma-Rho Matrix DZHe Ages											
	f1	f2	f3	f4	f5	t1	t2	t3	t4	t5	t6
f1	0.011	-0.035	0.01	-0.001	-0.013	0.173	0.152	0.051	0.033	0.023	0.01
f2	-0.035	0.018	0.026	-0.002	-0.033	-0.072	0.028	0.126	0.083	0.057	0.025
f3	0.01	0.026	0.02	-0.006	-0.187	0.021	0.074	0.391	0.473	0.329	0.146
f4	-0.001	-0.002	-0.006	0.022	-0.173	-0.002	-0.007	-0.019	0.186	0.321	0.144
f5	-0.013	-0.033	-0.187	-0.173	0.026	-0.027	-0.094	-0.277	-0.416	-0.315	-0.033
t1	0.173	-0.072	0.021	-0.002	-0.027	0.774	0.312	0.104	0.068	0.047	0.021
t2	0.152	0.028	0.074	-0.007	-0.094	0.312	0.631	0.365	0.239	0.166	0.074
t3	0.051	0.126	0.391	-0.019	-0.277	0.104	0.365	1.24	0.7	0.485	0.216
t4	0.033	0.083	0.473	0.186	-0.416	0.068	0.239	0.7	1.91	0.734	0.327
t5	0.023	0.057	0.329	0.321	-0.315	0.047	0.166	0.485	0.734	1.43	0.478
t6	0.01	0.025	0.146	0.144	-0.033	0.021	0.074	0.216	0.327	0.478	0.804

Figure 3.2. The plot above shows the Isoplot peak ages for the DZHe (circles) and DZ U-Pb (squares) age spectra and the age difference between them in Ma (in red letters). Six components were assigned a priori and Isoplot pick the best fits. The sigma-rho matrixes and peak age values are included in this figure. The derived Gaussian age peaks from both DZHe exhumational cooling and DZ U-Pb volcanic age components show only minor age discrepancies of 1-11 m.y.

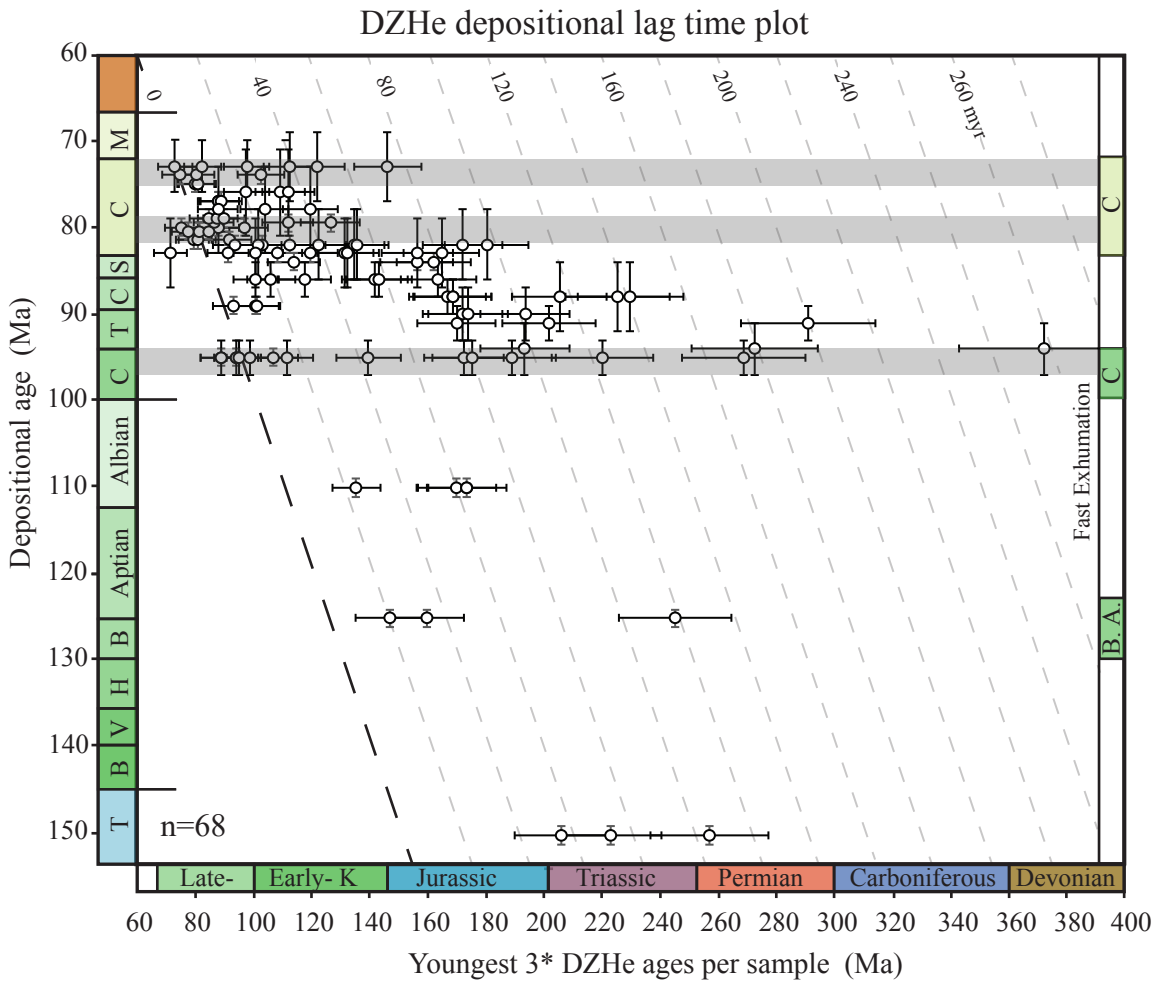


Figure 3.3. The DZHe depositional lag time plot shows three time intervals were DZHe ages are indistinguishable from depositional age indicating rapid retroarc exhumational cooling. The Cenomanian rapid cooling DZHe ages belong to the Cow Canyon Member of the Canyon Range Conglomerates and Dakota Formation. Campanian rapid cooled DZHe ages were also found in the Blackhawk Formation and Bluecastle Tongue.

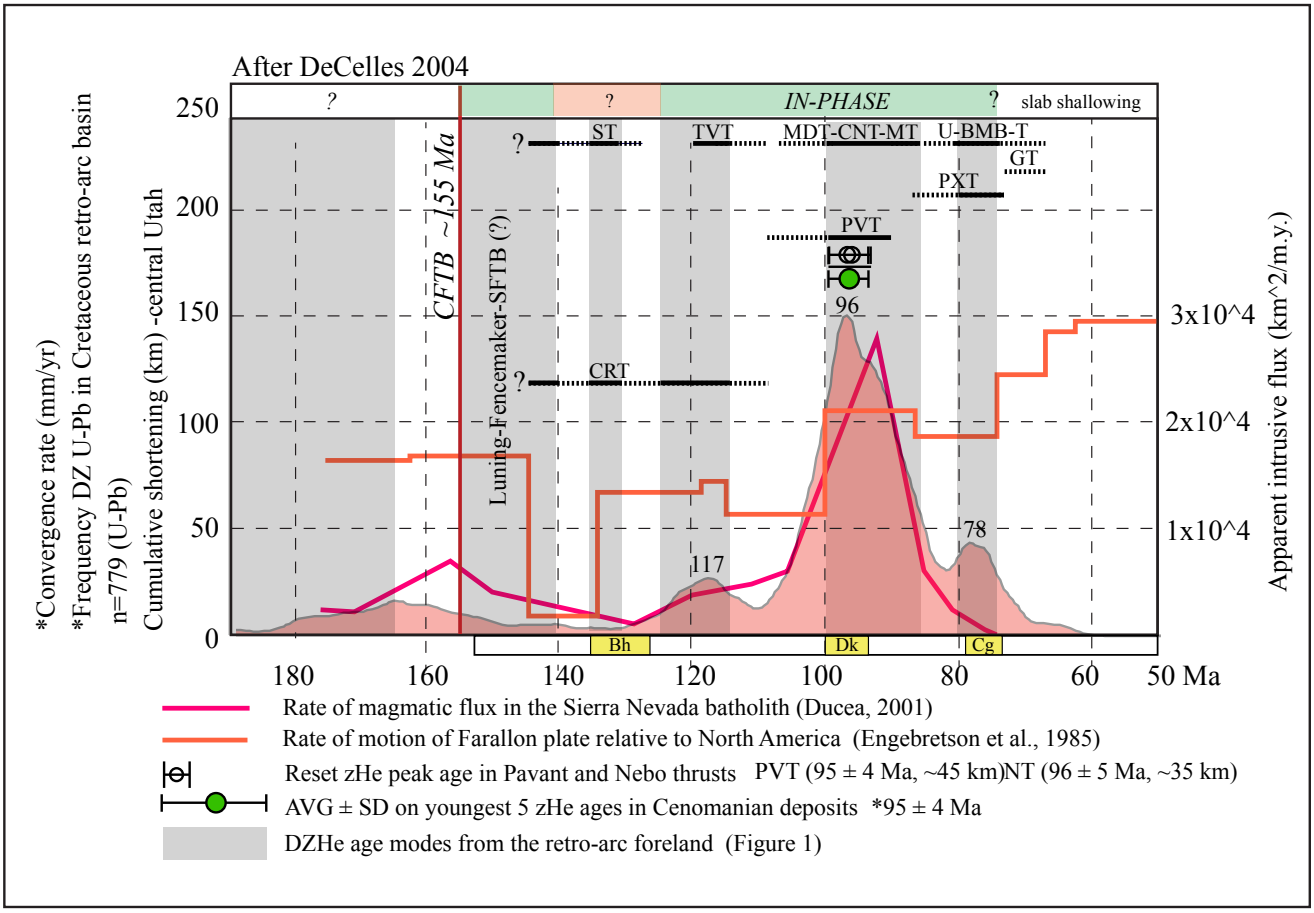


Figure 3.4. Chronological comparison between plate convergence [Engebretson et al., 1985], apparent intrusive fluxes in the Sierran Nevada batholith [Ducea, 2001], timing of deformation [DeCelles and Coogan, 2006], new thermochronometric constraints on deformation (circles and error bars), magmatic and cooling episodes recorded in the foreland basin (DZ and grey columns representing DZHe age modes, figure 1) and mayor changes in foreland basin strata architecture (yellow boxes: Bh-Buckhorn Conglomerate, Dk-Dakota Formation, Cg-Castlegate Sandstones). Increases in relative plate convergence overlap with cooling/exhumation and magmatic episodes. Major coarse clastic dispersal episodes appear synchronous with most cooling episodes.

Chapter Four: Detrital Zircon Geo-Thermochronology Of Precambrian And Paleozoic Units Exposed On The Sevier Orogenic Belt In North-Central Utah

ABSTRACT

Late Neoproterozoic to Permian strata exposed in the Sevier orogenic belt in north-central Utah provide a critical archive of continental paleogeography, tectonics, and sediment routing to the long-lived western North America continental margin. Although many aspects of western USA Paleozoic Cordilleran evolution have been previously explored in light of detailed lithostratigraphic, sediment provenance, environmental facies and structural reconstructions, the understanding of the interplay between sedimentation, sediment routing, and deformation especially during Late Neoproterozoic-Cambrian Rodinia rifting and Devonian-Permian Antler to Ancestral Rockies are still not fully resolved. Detrital zircon (DZ) U-Pb ages from Late Neoproterozoic and Cambrian strata reveal a major drainage reorganization and provenance shift as a result of Cambrian Rodinia rifting and break-up along the eastern and southern Laurentia margins. DZ U-Pb ages from Carboniferous to Permian Oquirrh basin strata constrain the onset of ARM-related sedimentation to be Late Mississippian to Early Pennsylvanian in age. The prominent presence of Yavapai-Mazatzal and Cratonic Paleoproterozoic DZ U-Pb age components and reproducibility of the DZ age spectra in Pennsylvanian-Permian Oquirrh strata reflects the exhumation, exposure and erosion of ARM basement-core uplifts in the mid-continent and establish their continued influence on Oquirrh basin sedimentation. Unreset, non-volcanic DZHe cooling ages from early Permian Oquirrh strata significantly narrow provenance to Yavapai-Mazatzal and Cratonic Paleoproterozoic basement cooled during ARM deformation and permits a DZHe age constrain on ARM exhumation and cooling (301 ± 6 Ma). The temporal overlap between provenance shifts and associated tectonic events in the Cordilleran miogeoclinal

and Oquirrh basin requires rapid responses between tectonics, sediment generation and transport across large portions of the North America continent.

Keywords: Oquirrh Basin, Ancestral Rocky Mountains, Rodinia Rifting, Detrital Zircon (U-Th)/(He-Pb) Double Dating.

INTRODUCTION

Throughout the Neoproterozoic and Phanerozoic major reorganizations in sediment routing systems have been associated with major shifts in continental-scale drainage and tectonism on both sides of the North America continent [*Dickinson et al.*, 1983b; *Dickinson*, 2004]. In north-central Utah exposures of both Cordilleran miogeocline and Carboniferous-Permian strata, provide an important archive of continental paleogeography, tectonics, and sediment routing along the long-lived western continental margin and the mid-continent, respectively [*Dickinson et al.*, 1983b; *Dickinson*, 2004]. However, multiple phases of extensional and contractional deformation involving compositionally similar sediment sources and recycling of strata, have led to complexity and ambiguity in petrographic provenance and structural reconstructions aiming to link continental deformation to major drainage reorganization [e.g., *Dickinson and Gehrels*, 2010; *Lawton et al.*, 2010; *Horton et al.*, 2016]. Thus, the understanding of the interplay between sedimentation, sediment routing, and deformation especially during Late Neoproterozoic-Cambrian Rodinia rifting and Devonian-Permian Antler to Ancestral Rockies are still not fully resolved, yet important to discriminate between western margin North America tectonic models [e.g., *Dickinson et al.*, 1983b; *Erskine*, 1997; *Geslin et al.*, 1999].

This study utilizes new detrital zircon (DZ) U-Pb geochronology to shed light on the tectono-stratigraphic evolution of north-central Utah and the Late Neoproterozoic-Paleozoic

western margin of North America in order to establish linkages between tectonics and the stratigraphic evolution. In an attempt to further refine the models and overcome inherent ambiguities of DZ U-Pb ages due to sediment recycling, a single-grain (U-Th)/(He-Pb) double dating analysis was carried out on shallowly buried late Paleozoic strata to directly link detrital cooling ages in the sink to major continental deformational events. This detailed isotopic study attempts to document (1) the influence of eastern Laurentia rifting on late Neoproterozoic-Cambrian western US passive margin provenance, (2) bracket the temporal transition leading to ARM-dominated sedimentation in Mississippian-Permian strata, (3) evaluate the possible basement involvement during deposition of Oquirrh Group and (4) test whether provenance changes are synchronous with the main phases of deformation and respond to rapid changes in tectonism, drainage reorganization, and sediment dispersal.

GEOLOGIC BACKGROUND

Numerous DZ geochronology, petrographic sandstone and clast studies of Precambrian to Mesozoic strata in the Sevier thrust belt (SFTB) and the Colorado Plateau have provided instrumental insights into the long-term paleogeography and continent drainage evolution of North America [e.g., *Gehrels and Dickinson*, 1995; 2000; *Dickinson and Gehrels*, 2003; *Dickinson and Gehrels*, 2008a; *Dickinson and Gehrels*, 2009; 2010; *Yonkee et al.*, 2014a]. The DZ U-Pb ages from the Precambrian to Paleozoic basins have a protracted sedimentary recycling history influenced by numerous deformational events spanning back to the formation of the North American continent in the Archean [*Dickinson et al.*, 1983b; *Dickinson and Gehrels*, 2010]. The North American continent evolved from Archean continental crust, juvenile volcanic arcs, and accreted oceanic terranes that coalesced in the Paleoproterozoic (ca. 2.0-1.8 Ga), during

the Trans-Hudson orogeny to form the cratonic core of the continent [e.g., *Van Schmus and Bickford*, 1981; *Whitmeyer and Karlstrom*, 2007]. Subsequent arc-continental accretion of the Yavapai (~1.8 Ga), Mazatzal (~1.6 Ga), Granite Rhyolite anorogenic plutons (ca. 1.5-1.3 Ga), and Grenville (ca. 1.3-0.9 Ga) provinces in conjunction with progressive granitoid plutonism formed a significant portion of the Laurentia-North American core [e.g., *Van Schmus and Bickford*, 1981; *Whitmeyer and Karlstrom*, 2007]. Between the end of the Neoproterozoic and the Early Devonian, continental-scale drainages networks fed sediments from the interior of Laurentia to the Cordilleran and Appalachian passive margins, ensuing completion of Rodinia rifting [*Dickinson et al.*, 1983b; *Dickinson*, 2004]. Rodinia rifting was multi-staged and spatially diachronous along the western (0.78-0.68 Ga) and eastern (0.62-0.55 Ga) Laurentia margins [*Dalziel*, 1991; *Moores*, 1991; *Karlstrom et al.*, 1999; *Li et al.*, 2008]. However, no sandstone compositional distinctions are evident indicative of source change during Rodinia rifting between late Neoproterozoic and Cambrian Cordilleran strata in North America [e.g., *Dickinson et al.*, 1983b].

Subsequent Late Devonian to the lower Triassic orogenies in both the Cordilleran (Antler, Ancestral Rockies, and Sonoma orogenies) and Appalachian regions (Acadian and Ouachita-Alleghenian orogenies) played a pivotal role in recycling of North America basement and Neoproterozoic to Paleozoic sedimentary detritus as a result of drainage reorganization and formation of topographic highs that led to a continent-wide drainage system, delivering sediments westward to the Cordilleran region during the late Paleozoic to early Mesozoic [*Dickinson et al.*, 1983b; *Dickinson*, 2004]. The most significant disruptions in Paleozoic Cordilleran sedimentation patterns occurred during the Late Devonian-Early Mississippian Antler orogeny [*Churkin Jr*, 1962; *Nilsen and Stewart*, 1980; *Dickinson et al.*, 1983a; *Gehrels*

and Dickinson, 2000] and Pennsylvanian-Permian Ancestral Rocky Mountains event (ARM) [*Kluth and Coney,* 1981; *Ye et al.,* 1996]. Although the details of Antler tectonics are a subject of debate [e.g., *Stewart and Poole,* 1974; *Ketner,* 2012], it seems to have resulted in the tectonic transport of upper Cambrian to upper Devonian strata over mid-upper Devonian Cordilleran miogeoclinal deposits [*Stewart and Poole,* 1974; *Dickinson et al.,* 1983a; *Smith et al.,* 1993]. Mississippian isopach maps show the depositional locus was adjacent to the Antler deformational front; however, little is known about the eastward extent of sedimentation as is obscured by lower shelf margin clastic deposits and carbonates from the continental craton to the east [e.g., *Rose,* 1976]. Deformational effects of the Antler orogeny persisted and were likely rejuvenated during ARM evolution [*Roberts et al.,* 1965; *Rich,* 1977; *Stevens,* 1977; *Skipp and Hall,* 1980; *Geslin et al.,* 1999]. The ARM formed during Laurentia and Gondwana collision forming the Ouachita-Appalachian mountains and causing intraplate deformation 1500 km from the active orogenic system, resulting in an diffuse array of basement uplifts and associated basins such as the Paradox and Oquirrh basins displaying disperse sediment pathways [e.g., *Roberts et al.,* 1965; *Kluth and Coney,* 1981]. In NW Utah and SE Idaho, the Pennsylvanian-Permian Oquirrh Group consist of shallow shelf limestone and sandstone packages that were deposited during ARM deformation reaching a maximum thickness of ~7.5 km [*Jordan and Douglass,* 1980]. Conglomerate clast compositions indicate derivation from middle to lower Paleozoic limestone and dolostone as well as reworked Mississippian cherts [*Jordan and Douglass,* 1980]. Clasts in upper Oquirrh strata along the southeastern margin show a compositional affinity to Lower Oquirrh limestones indicating unroofing from an adjacent fault blocks [*Larson and Clark,* 1978]. Comparative sandstone petrology of subarkosic arenites present in most of the upper Pennsylvanian-lower Permian Oquirrh strata share a strong resemblance to arkose-subarkose red

arenites from the western flank of ARM-Front Range uplift cored by Archean and Proterozoic granitic rocks [*Hubert*, 1960; *Jordan and Douglass*, 1980]. At this point, no influence of Antler-related deposition appears evident in the Oquirrh basin. The tectonic setting and evolution of the Oquirrh basin is complex, and have led to debates as to whether or not sediments were deposited in a passive tectonic setting, growth fault or ARM flexural basin. Recent studies, however, seem to favor basin deposition controlled by ARM driven subsidence [e.g., *Jordan and Douglass*, 1980; *Wu and Bruhn*, 1994; *Erskine*, 1997; *Geslin et al.*, 1999].

METHOD

Detrital zircon (U-Pb) and (U-Th)/He geochronology

In-situ detrital zircons U-Pb dating is one of the most widely used techniques for sediment provenance analysis [e.g., *Gehrels et al.*, 2008]. DZ U-Pb provenance is based on correlating detrital zircon crystallization ages to igneous-metamorphic source terranes of equal age [*Gehrels*, 2011; *Gehrels*, 2014]. DZ U-Pb age signatures can yield crucial insights into paleogeography, drainage evolution and sediment dispersal pathways, sediment mixing or recycling, and hinterland tectonics and unroofing [*Dickinson and Gehrels*, 2008a; *Gehrels*, 2014]. Moreover, when applied in a well-defined structural or stratigraphic context, DZ U-Pb ages can reveal unroofing episodes that can help constrain hinterland deformational histories and linkages between local deformation and basin evolution [e.g., *Lawton et al.*, 2010].

Adding (U-Th)/He dating to DZ U-Pb ages allows for potential further refinement of provenance identification by relating the source cooling history to the detrital thermochronometric record [*Rahl et al.*, 2003; *Reiners et al.*, 2005; *Saylor et al.*, 2012a]. Zircon (U-Th)/He ages record thermal information between 140-200 °C and is commonly used to

constraint large magnitude cooling events related to major fault block exhumation and unroofing [e.g., *Reiners et al.*, 2002; *Spotila*, 2005; *Stockli*, 2005]. Importantly the single-grain zircon U-Pb-He double dated approach provides a mean to differentiate volcanic zircons from rapidly exhumed zircon He age, critical for lag time calculations and interpreting tectonically-cooled detrital He signatures [*Saylor et al.*, 2012b].

Sampling strategy

In order to establish the late Neoproterozoic to Paleozoic sediment provenance evolution and explore the potential tectonic controls, coarse-to-medium grain size sandstones from late Neoproterozoic, Cambrian and upper Paleozoic strata were collected from the hanging wall of the Nebo, Canyon Range, and Pavant thrust sheets in central and northern Utah (Figure 4.1). The Precambrian Caddy Canyon, Inkon, Mutual formations and Cambrian Tintic, and Pioche Formations were sampled in the Canyon Range syncline along the Oak Creek and Wild Horse canyons. Samples of the Mississippian Humbug Formation and Great Blue Limestone and Cambrian to Precambrian strata were collected along road 014, south of Dry Mountains. Late Pennsylvanian Wallsburg Ridge, and Early Permian Granger Mnts, and Diamond Creek Formations were sampled east of Provo (Figure 4.1). Sample coordinates are in the appendix section table 1.

Sample analytical approach

Zircons were separated using standard mineral separation methods including rock crushing and gridding, water table and heavy liquid concentration, and magnetic susceptibility separation. Zircons were mounted on double-sided sticky tape on 1" acrylic discs for in-situ depth profile LA-ICP-MS U-Pb dating. Zircon were ablated using a PhotonMachine Analyte G.2 Excimer laser, with a Helex large-volume cell and the dry aerosol analyzed for U-Pb using a Thermo Element 2 ICP-MS. Randomly selected zircons (>120) were ablated using a 30 μm spot at energy of 4 mj/cm^2 for 30 seconds, interspersed with primary and secondary U-Pb standards GJ1 [*Jackson et al.*, 2004] and Pak1 (in-house zircon standard ~42 Ma from Pakistan). U-Pb data were reduced using Iolite software and VizualAge [*Paton et al.*, 2011; *Petrus and Kamber*, 2012]. In order to achieve a 95% confidence that all DZ U-Pb components representing >5% of the total population were recovered, ~120 zircon grains were analyzed per sample [*Vermeesch*, 2004]. Only DZ U-Pb ages with a percentage of discordance smaller than 30% were included in the detrital analysis (i.e. discordance defined as 1-(^{206}Pb/^{238}U age/^{207}Pb/^{206}Pb age)*100) [*Gehrels*, 2011]. Reported ages are ^{206}Pb/^{207}Pb ages when > 1.2 Ga and ^{206}Pb/^{238}U when < 1.2 Ma ages to improve DZ age precision in the analysis [*Gehrels et al.*, 2008].

Zircon grains for (U-Th)/He double dating were selected as a function of DZ U-Pb components to represent all major components. DZ U-Pb ages with a >10% discordance and geometrically inadequate for He analysis, such as zircons <60 μm, highly asymmetric, broken, fracture or rich in inclusions, were excluded. Zircon grains wrapped in 1 mm platinum capsules were degassed inside ultra-high vacuum chamber by diode laser heating at temperatures of ~1300 °C. The extracted gas was spiked with ^{3}He for isotope dilution, concentrated and purified using a cryogenic trap and a cold Zr-alloy getter system and ultimately analyzed using a Blazers

Prisma QMS-200 quadrupole mass-spectrometer. Laser degassing is repeated until ^{4}He yields were <1% of the total extracted ^{4}He. All zircons were unpacked from the platinum capsule for dissolution $^{235}U/^{238}U$, $^{230}Th/^{232}Th$ and $^{149}Sm/^{147}Sm$ -enriched tracers. Zircons were dissolved using HF-HNO_3, and HCl two-step pressure vessels digestion and subsequently analyzed by solution isotope dilution ICP-MS using a Thermo Element 2. All reported uncertainties for ZHe are 8% (2σ) standard error based on UT laboratory Fish Canyon Tuff reproducibility. The U-Pb and (U-Th)/He detrital zircon ages were obtained at the University of Texas at Austin, Jackson School of Geosciences, Department of Geology, UTChron geo-thermochronometric laboratories.

RESULTS

Inferred Detrital Zircon U-Pb Crystallization Sources

In order to interpret DZ U-Pb ages based on basement crystallization age provinces, this section briefly summarizes the North America basement provinces, from older to younger: The Archean cratons (ca. 2.8-2.5 Ga), cratonic Paleoproterozoic suture belts (ca. 2-1.8 Ga), Yavapai–Mazatzal basement (ca. 1.8-1.5 Ga), Granite-Rhyolite anorogenic Mesoproterozoic plutons (ca. 1.5-1.3 Ga), Grenville basement (ca. 1.3-0.9 Ga), uncertain origin (ca. 0.9-0.7 Ga), Peri-Gondwanan terranes (ca. 0.7-0.5 Ga), Appalachian plutons (ca. 0.5-0.3 Ga), Cordillera (250-150 Ma) and Sierran (128-80 Ma) arc provinces [e.g., *Dickinson and Gehrels*, 2008b; 2010; *Lawton and Bradford*, 2011; *Lawton et al.*, 2014].

Percentage description of provenance assemblages A-D

Variations in DZ U-Pb age components and their frequencies from Late Neoproterozoic to Paleozoic strata fall into four different DZ U-Pb age assemblages (Figure 4.2-3). Provenance

assemblage A, includes Late Neoproterozoic strata Caddy Cyn., Inkom and Mutual Formations exposed in the Canyon Range thrust sheet (Figure 4.1 and 4.3). The DZ U-Pb assemblage, defined by samples from the formations previously mentioned, is dominated by Grenville (57-66%), anorogenic Mesoproterozoic plutons (16-28%), and Yavapai-Mazatzal (3-10%) DZ U-Pb ages. The exception is an upper Mutual sample that has little resemblance to assemblage A and is comprised of mostly Yavapai-Mazatzal (70%), cratonic Paleoproterozoic belts (14%), anorogenic Mesoproterozoic plutons (8%), and Grenville ages (7%) (Figure 4.3).

Assemblage B is defined by DZ U-Pb ages from the Cambrian Tintic and Pioche Formations sampled from the Canyon Range and Pavant thrust-sheets bedrock in the Canyon Range (Figure 4.1 and 4.3). This interval is dominated chiefly by Grenville (17-47%), Anorogenic Mesoproterozoic plutons (20-43%) and Yavapai-Mazatzal ages (12-33%). Yavapai-Mazatzal DZ U-Pb ages increase from ~3-10% in assemblage A to 12-32% in assemblage B. Anorogenic Mesoproterozoic Plutons ages make up a maximum of 27% in assemblage A and increase to 43% in assemblage B. A systematic decrease in Grenville ages up-stratigraphy is observable in assemblage B.

Assemblage C represents the Mississippian Humbug Sandstone and Great Blue Lm. from the southern portion of the Charleston-Nebo Salient (Figure 4.1). While their DZ U-Pb distributions seem more variable from sample to sample, they are significantly different from the former assemblages due to first significant occurrence of Appalachian ages (5-21%) and Peri-Gondwanan ages (2-4%) as well as an abundant Grenville component with values in the order of 71% in the Humbug sandstones (Figure 4.3).

Assemblage D is defined by the Pennsylvanian Wallsburg Ridge, Permian Granger Mtn., and Diamond Creek Formations located east of Provo (Figure 4.1). In this interval, the dominant DZ U-Pb age modes are Grenville (27-37%) and Yavapai-Mazatzal (22-33%). In addition Paleozoic DZ U-Pb ages make up 6-11% and Cratonic Paleoproterozoic belts 4-10% in assemblage D.

Multidimensional Scaling and DZ (U-Pb) assemblages

Multidimentional scaling provides a quantitative and standard mean to evaluate multiple DZ U-Pb populations at once [*Vermeesch*, 2013]. This is particularly useful when DZ U-Pb population contains the same modal distribution and not unique components are evident. This is the case in the North America continent where the protracted sediment recycling history has prompted detrital zircon re-allocation concealing sediment derivation and transport reconstructions. The multidimensional scaling tool uses K-S statistics to evaluate DZ U-Pb population similarities between samples [*Vermeesch*, 2013]. The MDS plot shows the Late Neoproterozoic to Paleozoic strata can be subdivided into four DZ assemblages considering the stratigraphic ages (Figure 4.2).

Hinterland Zircon (U-Th)/(He-Pb) characterization

In an effort to recover DZHe cooling ages on Paleozoic strata that can narrow DZ U-Pb provenance and establish constraints on the exhumational cooling of Paleozoic source rocks we employed single-grain zircon (U-Th)(He-Pb) double dating on Neoproterozoic and Paleozoic strata from north-central Utah.

DZHe ages from Neoproterozoic to Mississippian strata south of Provo contain mostly Albian to Turonian ages (Figure 4.4). These DZHe cooling ages are significantly younger than their depositional age and therefore contained no useful DZHe cooling age information relatable to Paleozoic source provinces.

The presence of Early Cretaceous DZHe ages in the Pennsylvanian Wallsburg Fm. and Granger Mnts regardless of older DZHe cooling ages suggest this stratigraphic interval was buried and heated to temperatures sufficient for zircon resetting in the Cretaceous and thus the thermal record derived from these DZHe ages is more likely representative of Cretaceous heating (Figure 4.4). Similarly, Canyon Range, Precambrian-Cambrian strata contains a broad range of Late Cretaceous to Precambrian DZHe ages and were not used to constraint cooling other than Late Cretaceous (Figure 4.4).

In contrast, early Permian Diamond Creek Formation, contains DZHe ages significantly older than depositional age and double dated zircons with equal DZ U-Pb and DZHe ages indicate no thermal resetting of detrital zircons (Figure 4.4). Therefore, DZHe cooling ages from the Diamond Creek Formation were the only ones used to narrow sediment provenance based on North America crystallization DZ U-Pb age provinces and source exhumational cooling history.

The Diamond Creek Formation includes Devonian (32%), Carboniferous (22%), Permian (10%), Ordovician (10%) and Ediacaran (14%) DZHe cooling ages. The DZHe age percentage associated with Antler (late Devonian and early Mississippian) and ARM (late Pennsylvanian to early Permian) cooling ages constitute 19% and 23%, in that order, of the whole population. Appalachian DZ U-Pb mode recorded equal Appalachian DZHe ages. Peri-Gondwanan DZ U-Pb mode contains late Pennsylvanian to early Permian DZHe ages. Grenville, Yavapai-Mazatzal, and Archean DZ U-Pb modes contain DZHe ages ranging between Ordovician to early Permian

in age. Cratonic Paleoproterozoic and Northwest Laurentia DZ U-Pb modes contain significantly older Precambrian-Cambrian DZHe ages.

DISCUSSION

Cambrian sediment provenance from eastern Laurentia rifting

Passive margin sediments in western Laurentia were sourced from major drainage systems involving local and distal Mesoproterozoic to Archean continental terranes [e.g., *Stewart et al.*, 2001; *Yonkee et al.*, 2014b]. The DZ U-Pb ages distribution in assemblage A agrees with these previous DZ U-Pb age provenance studies that indicate eastern derivation as evidenced by Grenville, Mesoproterozoic anorogenic terranes and to a lesser extent Yavapai-Mazatzal and Archean detrital zircons. Cambrian assemblage B chronicles a gradual reduction in Grenville DZ U-Pb ages up-section and an increase in Mesoproterozoic anorogenic plutonic and Yavapai-Mazatzal detrital zircons. The Grenville DZ U-Pb age mode from 66% in the late Neoproterozoic decreases to 17% in the Cambrian Pioche Formation (Figure 4.3). This significant change in DZ U-Pb age population coincides temporally with Cambrian Rodinia rifting (eastern Laurentia) leading to uplift and erosion of Mesoproterozoic anorogenic basement in the eastern and south-central USA [e.g., *Whitmeyer and Karlstrom*, 2007]. This includes extensional deformation associated with Cambrian failed rift arms, such as the Oklahoma aulacogen that led to major normal faulting across portions of the Paleoproterozoic and Mesoproterozoic basement, including Yavapai-Mazatzal and Mesoproterozoic anorogenic terranes in the early Cambrian [e.g., *Wickham*, 1978; *Lambert et al.*, 1988; *Thomas et al.*, 2016]. Hence, we attribute the significant increase in Yavapai-Mazatzal and Mesoproterozoic anorogenic DZ U-Pb ages in

assemblage B to a major drainage reorganization and provenance shift as a result of the Rodinia rifting and break-up along the eastern and southern Laurentia margin.

Mississippian to Permian sediment provenance (Oquirrh basin)

The tectonic and stratigraphic history of upper Paleozoic strata in western USA (central Utah) has been largely reconstructed in light of isopach maps, environmental reconstructions, and provenance analyses [e.g., *Bissell*, 1970; *Rose*, 1976; *Stevens*, 1977; *Jordan and Douglass*, 1980]. Although, these studies have helped constrain the spatially complex evolution and distribution of highland and depositional centers in response to major tectonic shifts such as the Antler and ARM orogeny, direct constraints on sediment derivation and dispersal from western Antler provinces, eastern continental craton and/or ARM-related basement-core uplifts still remain to be established.

This is particularly the case for Mississippian strata in north central Utah, where both westward or eastward sediment transport can be inferred from provenance sandstone petrography, landmasses trends and paleoenviromental reconstructions [e.g., *Dickinson et al.*, 1983a; *Smith et al.*, 1993; *Gehrels and Dickinson*, 2000]. Eastward sediment transport was proposed for quartz–rich sandstone layers within the Mississippian Deseret Limestone (stratigraphically below Humbug Formation), in western Utah, believed to be fed from Cambrian quartzites exhumed within the Antler orogenic system in Nevada on the basis of compositional equivalency [*Roberts et al.*, 1965]. In contrast, paleoenvironmental and carbonate platform geometric reconstruction by *Rose* [1976] suggests lower shelf margin sands in the Mississippian Humbug Formation were more likely transported from the adjacent western edge of the stable craton (Laurentia). Thus, sediment contributions from Laurentia craton including eastern

Grenville terranes undergoing Mississippian Appalachian deformation are conceivable. Paleocurrent data reconstructions for Mississippian sandstones in this portion of central Utah have not been published. Thus, the influenced of Antler or Laurentian craton on Mississippian sediment provenance in this portion of north-central Utah remains uncertain.

The Pennsylvanian to Permian Oquirrh basin tectono-depositional setting has been subject to debate as well in part due the lack of depositional patterns and thickness yielding a strong relation to ARM deformation and lack of clastic compositional data that could directly link ARM basement-cored uplifts to Oquirrh sedimentation [e.g., *Erskine*, 1997]. Paleocurrent measurements in the Pennsylvanian portion of the Oquirrh basin do not point to a single sediment source, nor are they suggestive of basin margin fault-controlled sedimentation, instead indicating sediment recycling and influx from both the eastern flank and northwestern end of the basin [*Jordan and Douglass*, 1980]. The only clastic compositional evidence for active deformation is the presence of lower Oquirrh limestone clasts in the upper Oquirrh strata indicating uplift and strata inversion adjacent to the basin in the early Permian [*Larson and Clark*, 1978]. However, their presence in the early Permian appear asynchronous with peak ARM-related deformation (Late Pennsylvanian). The only potential line of evidence linking ARM basement-core uplift to the Oquirrh Group is the presence of intersperse subarkose sandstones in the southeastern edge of the Oquirrh basin, which are compositionally similar to red beds found along other ARM-related uplifts such as the ARM Front Range [*Jordan and Douglass*, 1980], but no other temporal or spatial association can be made to cement their derivation. Therefore, it is still unclear when the onset of ARM-related sedimentation is recorded in Oquirrh strata, in central-northern Utah, and what sources are potentially involved.

DZ U-Pb ages from the Mississippian Humbug Formation contain significant input from the Grenville basement and Appalachian plutons (Figure 4.2) suggestive of an Appalachian region derivation. Based on DZ U-Pb ages we propose the lower shelf margins sands in the Humbug Formation were brought from the adjacent western edge of the stable craton with sediment genesis as far as eastern Grenville Laurentia terranes (Appalachian). Although, recycling of Grenville DZ U-Pb ages from exhumed and exposed lower to middle Paleozoic strata during Antler orogeny [e.g., *Gehrels and Dickinson*, 1995; 2000] could explain the Grenville ages in the Humbug strata, the shortage of Mesoproterozoic anorogenic and Yavapai-Mazatzal DZ ages, key components in lower Paleozoic strata (Figure 4.3), makes this scenario less likely. Moreover, the lack of potential sources for lower Paleozoic DZ ages in western USA strata (with the exception of mafic volcanics documented in the Roberts allochthon –[*Rubin et al.*, 1990]) reinforces a westward transport scenario influenced by Appalachian region sources.

The contrasting differences in DZ U-Pb ages between the Mississippian Humbug Fm. and Pennsylvanian-Permian strata of the Oquirrh group record a major provenance shifts in terrane source rock. The prominent presence of Yavapai-Mazatzal and Cratonic Proterozoic DZ U-Pb age components and reproducibility of the DZ age spectra in Pennsylvanian-Permian Oquirrh strata reflects the exhumation, exposure and erosion of ARM basement-core uplifts in the mid-continent and establish their continued influence on Oquirrh basin sedimentation. This is propose in light of the established ages of North America terranes and basement involved in ARM deformation [e.g., *Kluth and Coney*, 1981; *Marshak et al.*, 2000; *Whitmeyer and Karlstrom*, 2007].

The earliest visible influenced of ARM dominated sedimentation and likely onset of ARM uplift is marked by the introduction of significant Yavapai-Mazatzal and cratonic

Proterozoic DZ ages in the late Mississippian Great Blue Limestone (Figure 4.3). The large input of Appalachian Paleozoic, Grenville, Anorogenic plutons and Archean DZ U-Pb ages may indicate denudation of Paleozoic cover strata above ARM basement-cored uplifts or regionally derived from synchronous Ouachita-Appalachian deformational fronts, either way, eastward derivation from active deformational fronts, and thus a linkage between sedimentation and tectonism can be established.

DZHe cooling ages from early Permian Oquirrh basin

The Diamond Creek Formation provides an undisturbed record of DZHe cooling ages as evidenced by the presence of first cycle Carboniferous and Silurian fast cooled volcanics and DZHe ages older than their depositional age (Figure 4.4). Yavapai-Mazatzal and Cratonic Proterozoic zircons containing Late Pennsylvanian-Early Permian DZHe cooling ages unequivocally indicates derivation from exhumed ARM basement-cored uplifts [e.g., *Kluth and Coney*, 1981]. Grenville and Peri-Gondwana zircons yielded as well ARM-related DZHe cooling ages and suggest derivation from whether (1) deeply buried lower Paleozoic strata cooled by exhumation during ARM-related deformation or (2) regionally derived from southern and eastern Quachita-Appalachian orogenic belts.

Detrital constraints on ARM-related cooling are in this study proposed due the temporal overlap between the youngest component of DZHe ages and proposed Kasimovian-Moscovian (~304 Ma) timing of ARM uplifts [*Curtis*, 1958; *Mallory*, 1966; 1975; *Kluth and Coney*, 1981]. The youngest DZHe age population yielded an average 296 ± 14 Ma (average ± 1σ) age (youngest set of DZHe ages whose ages overlaps at 2σ), however, by excluding the youngest

most DZHe age a significant reduction in variance is gained producing an age of 301 ± 6 Ma, narrowing the detrital constraints on ARM-related cooling (Figure 4.4).

Older DZHe ages on Precambrian zircons preserve a cooling record in agreement with the proposed Antler deformation in Nevada (~383-347 Ma) [*Johnson and Pendergast,* 1981]. This DZHe age mode has an average and standard deviation age of 358 ± 22 Ma (calculated the same way as above and excluding all ages used in the former ARM cooling estimate). These DZHe ages, if truly derived from Antler sources, suggest eastward sediment transport between the Late Devonian and Early Mississippian, the proposed time of Antler deformation. Alternatively, in light of some Grenville zircons yielding Devonian cooling ages a potential derivation from the Arcadian orogenic event could be proposed. However, this provenance is less likely because the same Devonian cooling ages are present as well in Yavapai-Mazatzal, Cratonic Paleoproterozoic and Archean DZ U-Pb ages suggestive of a multi-component source being exhumed coevally such as Cambrian-Devonian strata from the Antler orogeny which are known to yield all the U-Pb components mentioned above [e.g., *Gehrels and Dickinson*, 2000].

Late Neoproterozoic DZHe cooling ages points to derivation from terranes cooled coevally with Rodinia rifting and their presence on mostly late Archean to middle Paleoproterozoic zircons narrow cooling to Archean and lower Paleozoic basements along the western edge of Laurentia. Although the original source of these DZHe ages points to a north-west derivation, considering the presence of ARM-cooling ages and dominant Yavapai-Mazatzal DZ ages it is more likely they were recycled from detritus exhumed above basement-cored uplift of the ARM orogeny, which requires eastward transport prior ARM uplifts.

CONCLUSIONS

Significant changes in DZ populations between Precambrian and Cambrian strata indicate a provenance shift. Based on the timing of eastern margin Laurentia rifting and significant increase in Mesoproterozoic anorogenic and Yavapai-Mazatzal DZ U-Pb ages we hypothesize drainage reorganization, modulated by Cambrian Rodinia rifting allowed the introduction of newly exposed Mesoproterozoic anorogenic and Yavapai-Mazatzal basement detritus into the Cordilleran miogeocline deposits.

DZ U-Pb ages from the Mississippian Humbug Formation deposited along the lower shelf margin of western Laurentia suggest sourcing from the adjacent stable craton of Laurentia and not the active Antler orogenic belt to the west.

DZ geochronology brackets the earliest influenced of ARM sedimentation in central-northern Utah to be Mississippian in age, earlier than Oquirrh Group deposition. The presence of abundant Yavapai-Mazatzal DZ U-Pb ages and reproducibility of DZ U-Pb signatures in Oquirrh strata suggest undisturbed sourcing from ARM uplifts from the Pennsylvanian to the early Permian. DZHe cooling ages (~301 Ma) from Yavapai-Mazatzal zircons in Early Permian Oquirrh strata narrows significantly provenance to ARM basement-cored uplifts to the east. These DZ U-Pb and DZHe ages for the first time provide a direct link to ARM basement-cored uplifts and rapid drainage reorganization and sediment transport to Oquirrh sink.

The Late Permian Diamond Creek DZHe cooling ages provide indirect constraint on ARM (301 ± 6) and Antler (358 ± 22 Ma) deformational cooling.

The temporal overlap between provenance shifts and associated tectonic events in the Oquirrh and Cordilleran miogeoclinal basins entail relatively rapid sediment dispersal and transport across the North America continent.

This study adds new DZ U-Pb and DZHe cooling age constraints on the existing detrital geo-thermochronometric record of western USA, which has allow refining provenance studies aiming to link hinterland deformation to Cordilleran foreland basin evolution [e.g., *Lawton et al.*, 2010; *Lawton and Bradford*, 2011; *Lawton et al.*, 2014] as well as modern continental drainage patterns to sediment transport into the Gulf of Mexico [*Sharman et al.*, 2016; *Xu et al.*, 2017].

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FIGURES

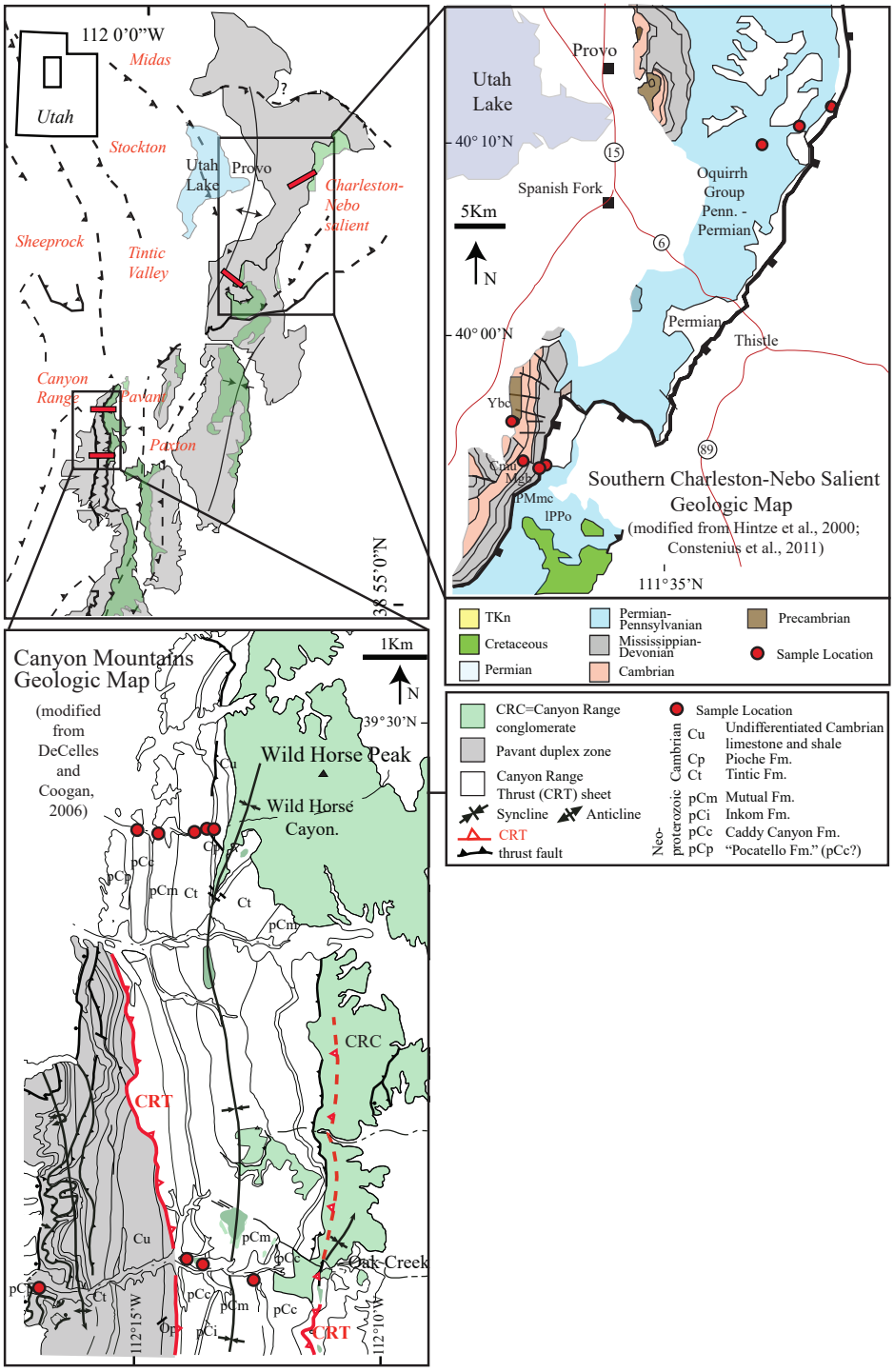

Figure 4.1. Regional index map showing Precambrian and Paleozoic strata in central-northern Utah and sample locations (displayed as red dots and rectangles). The Charleston-Nebo salient southern section map was modified from Witkind and Weiss [1991], Hintze et al., [2000] and Constenius et al., [2011]. The Canyon Mountains structural map was modified from DeCelles and Coogan [2006] to show sample location of Precambrian Cambrian strata.

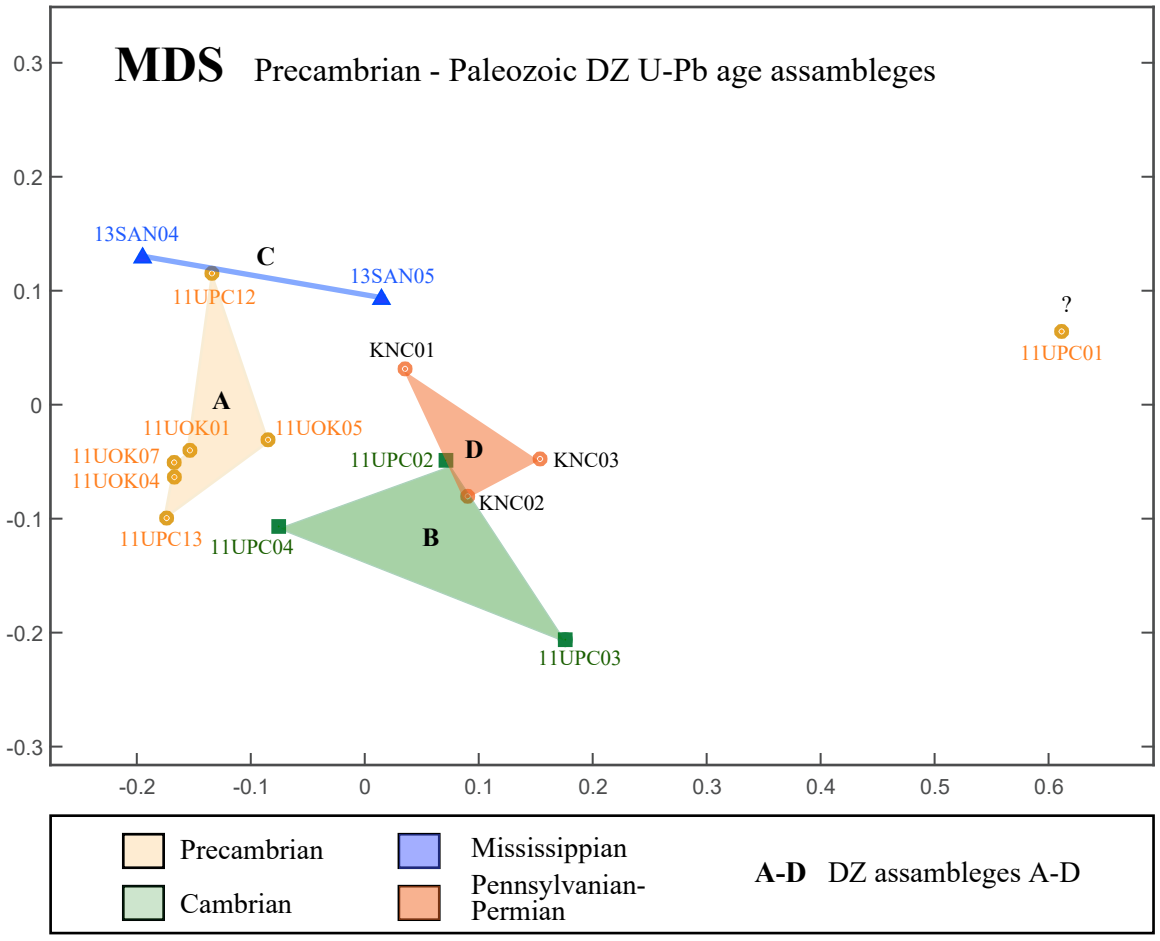

Figure 4.2. Multi-sample comparison of Precambrian and Paleozoic strata DZ U-Pb ages. Proposed equal provenance assemblages (A-D) are based on stratigraphic ages and DZ U-Pb sample similarity.

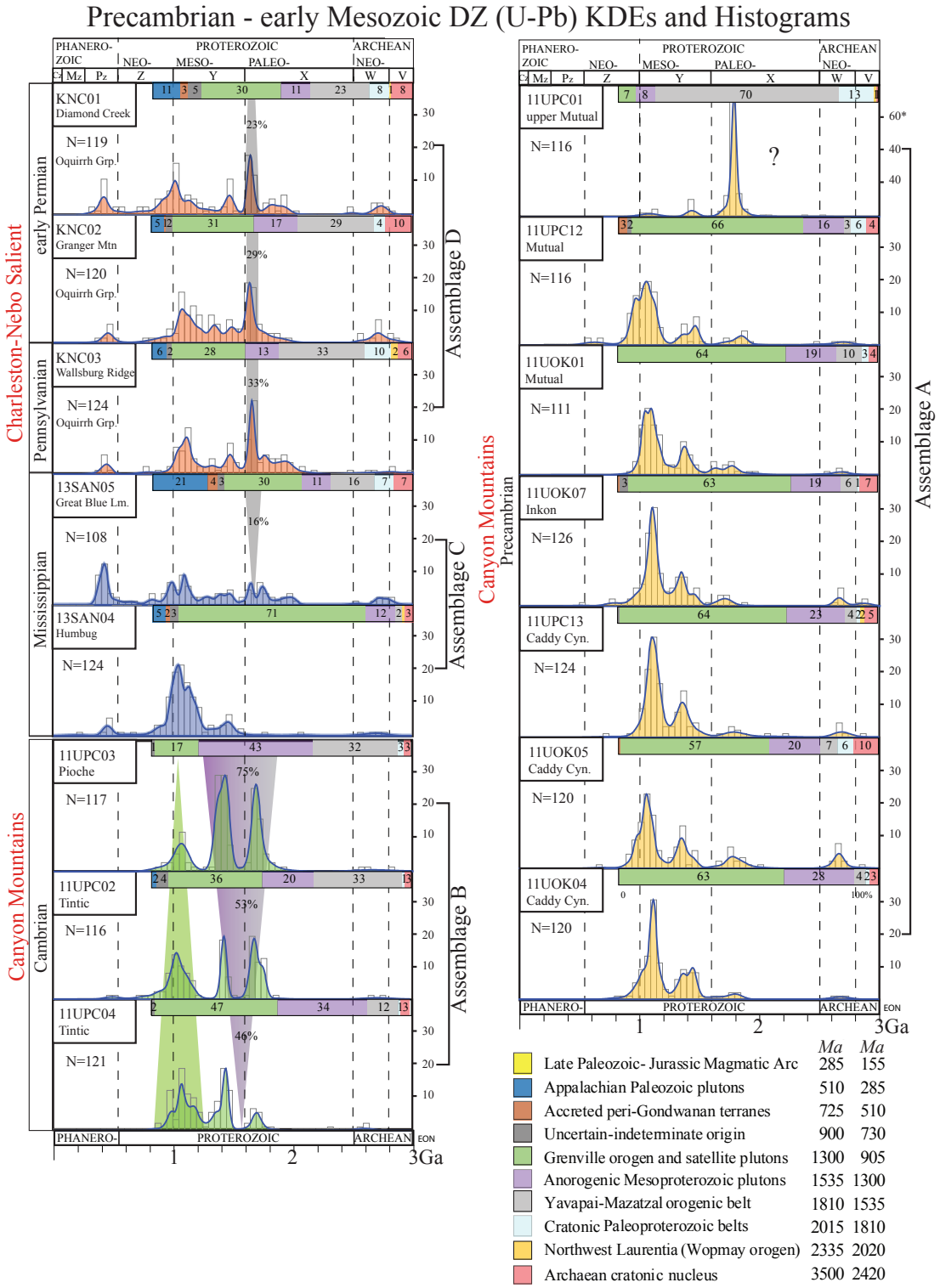

Figure 4.3. DZ U-Pb KDEs and histograms of Precambrian-Cambrian strata in the Canyon Range Mountains (assemblages A-B) and Carboniferous-Permian strata (assemblages C-D). Assemblages A-D are color coded to match figure 2. The bars above the DZ KDEs boxes show the percentage of zircon grains that range between inferred North America magmatic events [Dickinson and Gehrels, 2010]. Triangles indicate reduction or increase in component % and are color-coded to denote the components of interest.

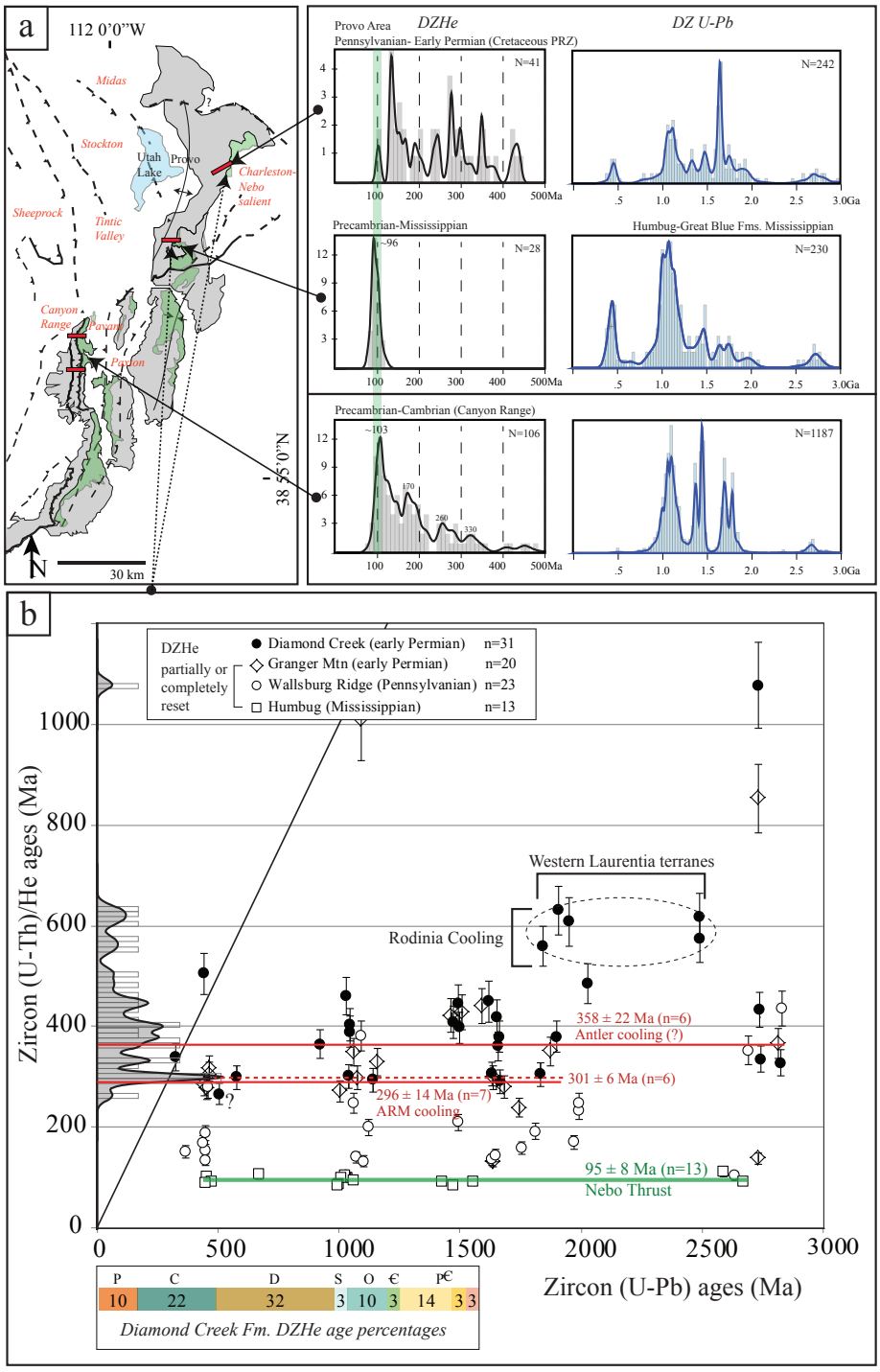

Figure 4.4. a) DZHe ages from Precambrian and Paleozoic strata. Precambrian and Cambrian strata in the Canyon Mountains, Precambrian to Mississippian strata in the southern Charleston Nebo salient, and Pennsylvanian to early Permian strata show similar DZHe age population and were combined in that order. b) Plot showing double dated zircon ages from Mississippian Humbug through Permian Diamond Creek Formations. DZHe ages in the Diamond Creek (black points) show various modes that coincide with ARM, Antler and Rodinia rifting. The red flat lines are the average DZHe age calculated from the two youngest Paleozoic DZHe age populations. The zircon ages for the Humbug, Wallsburg, and Granger Formations (shown in white) appear influenced by Cretaceous cooling and are not use in this study. The green flat line shows fully-reset DZHe ages indicative of Cenomanian cooling associated with Nebo thrust exhumation (see Chapter 1).

Chapter Five: New Insights Into The Stratigraphic And Structural Evolution Of The Middle To Late Jurassic Neuquén Basin From Detrital Zircon (U-Th)/(He-Pb) And Apatite (U-Th)/He Ages

ABSTRACT

Previous studies on the Lower-Middle Jurassic Cuyo Group in the southern Neuquén Basin, Argentina, have discussed evidence for pre- and syn-depositional structural inversion during pre-Andean shortening. While the Cuyo Group sequence stratigraphic and facies framework are well understood, the effects of structural inversion and continued post-rift thermal subsidence on sediment provenance and dispersal as well as the timing and magnitude of deformation during and after Cuyo Group deposition remain poorly constrained. The Cuyo Group comprises both reservoir-quality fluvial to deep-marine siliciclastic deposits and an established petroleum source-rock. Thus, the temporal relationship between the onset of deformation and sediment provenance and dispersal are crucial aspects for an improved understanding of both the basin evolution and petroleum system. This study presents new detrital zircon (U-Th)/(He-Pb) double dating from the Los Molles and Las Lajas Formations of the Cuyo Group in the southern area of SW Zapala to evaluate the influence of early rift inversion on sediment routing, provenance, and paleogeography and to provide critical chronostratigraphic constraints. The youngest concordant Jurassic detrital zircon (DZ) U-Pb and He ages from the Las Lajas and Los Molles Formations in Lohan Mahuida and La Jardinera suggest a late Middle Jurassic depositional age. The DZ U-Pb provenance analysis confirms that both formations are part of the same Middle Jurassic shelf margin and were both sourced from the Choiyoi basement and Late Triassic to Middle Jurassic Andean magmatic arc to the west, characterized by dominant Permian-Triassic and Late Triassic-Middle Jurassic age modes and Permian to Jurassic

He cooling ages. The detrital He (DZHe) ages provide additional provenance constraints by recording three discrete tectonic hinterland cooling events in (1) the middle Triassic, (2) the Triassic-Jurassic, and (3) the Middle-Late Jurassic, documenting tectonically-driven exhumation during rifting and contractional stages prior and during early Neuquén basin evolution. Triassic-Jurassic He cooling ages of zircons derived from the Choiyoi Group clearly document the existence of pre-Cuyo Pangean extensional structures and basins in the source area. Furthermore, the abundance of short lag time, non-volcanic DZHe ages suggests rapid tectonic exhumation of both Choiyoi and Carboniferous basement during deposition of the Cuyo Group. This evidence implies structural inversion earlier than previously suggested during Middle Jurassic Cuyo Group deposition in the Huincul ridge region and prior to Late Jurassic Tordillo Group deposition. Hence, this challenges conventional Cuyo Group tectono-depositional models that advocated post-rift thermal sagging as the primary control on subsidence and deposition. The occurrence of unreset first-cycle volcanic (U-Th)/(He-Pb) ages implies that the Cuyo Group burial never reached depths >4-5 kilometers. Exhumation to shallower crustal depths was spatially partitioned and driven by Cenozoic Andean shortening as constrained by AHe ages.

Keywords: Cuyo Group, Los Molles and Las Lajas Formation, Detrital Zircon (U-Th)/(He-Pb) Double Dating, Apatite (U-Th)/He, Huincul ridge.

INTRODUCTION

The Lower-Middle Jurassic Cuyo Group in the Neuquén basin has been of both academic and hydrocarbon exploration interest in large due to its established source-rock and uniquely sand-rich (Las Lajas Formation) reservoir potential [*Uliana and Legarreta*, 1993; *Rossi and*

Steel, 2016]. While early studies of basin architecture in the Cuyo Group suggested that deposition was controlled by extensional deformation during the late stages of Pangean rifting and subsequent basin-wide thermal subsidence [*Vergani et al.*, 1995; *Franzese et al.*, 2003], more recent seismic and sedimentological investigations have advocated for pre- and syn-depositional oblique transpressional faulting linked to an early onset of structural inversion along structures such as or related to the Huincul ridge system [*Uliana and Legarreta*, 1993; *Martinez et al.*, 2006; *Mosquera and Ramos*, 2006; *Silvestro and Zubiri*, 2008; *Pángaro et al.*, 2009; *Naipauer et al.*, 2012; *Rossi and Steel*, 2016]. The initiation of structural inversion and transpression in the Neuquén Basin has been shown to be diachronous, migrating northward in the Late to Middle Jurassic from the southern basin margin to the Huincul ridge [*Mosquera and Ramos*, 2006; *Silvestro and Zubiri*, 2008; *Pángaro et al.*, 2009; *Naipauer et al.*, 2012]. Although, the chronology of intra-basin contractional deformation [*Mosquera and Ramos*, 2006; *Silvestro and Zubiri*, 2008], sequence stratigraphic [*Zavala and Riccardi*, 1996], and changes in sediment architecture [*Zavala and Riccardi*, 1996; *Rossi and Steel*, 2016] has been documented, the competing effects of oblique contraction and thermal subsidence on sediment provenance and dispersal during Cuyo Group deposition remain poorly understood. These aspects are, however, of fundamental importance in reconstructing depositional models that link drainage evolution to the evolving paleogeography and sequence stratigraphic framework, in particular, in scenarios were active deformation appears to control both the irregular coastline morphology and the exceptionally sand-rich character of Cuyo Group strata in the Lohan Mahuida area [*Rossi and Steel*, 2016]. In order to elucidate the role of Jurassic rift inversion, hinterland exhumation, and the evolving surrounding paleogeography, including arc-volcanism, this study presents new detrital zircon (U-Th)/(He-Pb) double dating on samples from the Los Molles and Las Lajas

Formations south of Zapala (Argentina). The youngest concordant detrital zircon (DZ) ages were used to provide maximum depositional age constraints for both formations in La Jardinera and Lohan Mahuida areas. The DZ double dated spectra help reveal the coupling between hinterland tectonics and basin evolution in light of sediment provenance thermal and crystallization age constrains. Lastly, apatite and zircon (U-Th)/He ages are also employed to elucidate the burial and subsequent exhumation history of the Cuyo Group during Cretaceous to the Miocene by Andean contractional tectonics.

GEOLOGICAL BACKGROUND

The Neuquén Basin of west-central Argentina and central Chile (Figure 5.1) is flanked by the cratonic Sierra Pintada Massif in the northeast, the North Patagonian Massif in the south and by the Andean magmatic arc in the west [*Spalletti et al.*, 2010] and it represents the northern-most edge of Patagonia. The Neuquén basin sits atop of the Cuyania, Chilenian and Patagonian terranes that were accreted to the Gondwanan margin during the Paleozoic [*Ramos,* 2000]. Inherited penetrative deformation and metamorphic fabrics played a pivotal role in localizing intra-basin deformation during the entire evolution of the Neuquén basin [*Mosquera and Ramos*, 2006]. By Permian-Triassic times, a rhyolitic magmatic event, represented by the Choiyoi Group, covered a large portion of the crystalline and metamorphic basement across the region, including the Neuquén basin [*Álvarez et al.*, 2011]. Although the tectonic origin and timing of Choiyoi magmatism are still controversial [*Kleiman and Japas,* 2002; *Kleiman et al.*, 2005; *Kleiman and Japas*, 2009], it is believed to be associated with Permian-Triassic orogenies [*Ramos et al.*, 1986] and the earliest phase of subsequent extensional collapse [*Uliana and Legarreta*, 1993; *Tankard et al.*, 1995; *Martinez et al.*, 2006] in the Sierras Australes, Sierra

Grande, Precordillera, Sierra Pintada and South Patagonia orogenic belts [*Cobbold et al.*, 1986; *Vergani et al.*, 1995]. Overlying the Choiyoi Group in the Neuquén Basin are volcanoclastic, lacustrine and shallow marine deposits of the pre-Cuyo Group [*Vergani et al.*, 1995; *Legarreta and Uliana*, 1996; *Franzese et al.*, 2006; *Mosquera and Ramos*, 2006]. They were deposited in isolated half-grabens related to Pangean rifting. Subsequently, a shift in convergence direction between the Aluk and the South American plate resulted in inversion of Triassic-Lower Jurassic rift structures along the southern Neuquén Basin margin, preceding a major transpressional event along the Huincul ridge [*Mosquera and Ramos*, 2006]. Growth strata patterns and angular erosional unconformities within pre-Cuyo strata place the onset of inversion along the eastern (Estancia Vieja depocenter) and southern (China Muerta depocenter) margins of the Neuquén basin in the Early Jurassic [*Mosquera and Ramos*, 2006]. The onset of rift inversion in the eastern portion of the Huincul system has been constrained as post pre-Cuyo Group deposition and prior to the Pliensbachian marine transgression of the Cuyo Group as evidenced on seismic sections by showing pre-Cuyo Group toplap patterns against Los Molles Formation [*Mosquera and Ramos*, 2006]. Syn-orogenic strata and diachronous unconformities in seismic sections suggest the earliest onset of contractional and transpressional faulting along the western portion of the Huincul ridge is late Toarcian (earliest Cuyo Group?) and persisted until the deposition of the Cenomanian Mendoza Group [*Silvestro and Zubiri*, 2008]. The Huincul ridge system formed as a result of right-lateral transpressional deformation along the reactivated Patagonia suture adjacent to the Cuyania and Chilenian terranes and is characterized by protracted deformation spanning from Early Jurassic to the Tertiary [*Chernicoff and Zappettini*, 2004; *Mosquera and Ramos*, 2006]. During Lower Jurassic times enhanced thermal subsidence resulted in widening

depocenters, a widespread diachronous marine transgression, and deposition of the marine Early Jurassic Cuyo Group [*Vergani et al.*, 1995; *Legarreta and Uliana*, 1996; *Franzese et al.*, 2003].

The Cuyo Group includes the fluvial Challaico Formation, the shallow marine Las Lajas Formation, and the slope to deep marine Los Molles Formation, all spanning in age from Early to Middle Jurassic. These formations are part of a single fluvial to deep-marine shelf-margin system that prograded from uplands in the south and southeast during the Jurassic into the Neuquén Embayment, a large gulf of the Pacific Ocean behind the Andean magmatic arc. The study area known as La Jardinera is located along the south and southeastern shores of this embayment. The La Jardinera sedimentary prism migrated generally northwards into the Neuquén gulf [*Vann*, 2013; *Tudor*, 2014; *Shin*, 2015], whereas in the margin nearer Zapala, clastics prograded towards the north-northwest, laterally infilling the gulf [*Rossi and Steel*, 2016].

The magmatic arc and its associated extensional back-arc basins became fully developed by the Upper Jurassic [*Franzese et al.*, 2003]. From Late Jurassic to Early Cretaceous times, the Neuquén Basin was characterized by intraplate contractional deformation [*Vergani et al.*, 1995] and resulted in localized basin subsidence and isolated depocenters during the deposition of the Lotena, Mendoza, and Rayoso Groups [*Mosquera and Ramos*, 2006]. Andean contractional deformation in the Late Cretaceous lead to the inversion and overprinting of pre-existing extensional and earlier contractional structures, resulting in the deposition of the Neuquén and Malargüe Groups in a retro-arc foreland basin setting. Continued syn-orogenic deposition, volcanism, and Huincul ridge inversion eventually lead to a broken foreland basin in the Cenozoic and the subsequent exposure on the Cuyo Group [*Mosquera and Ramos*, 2006].

STRATIGRAPHIC CONTEXT AND SAMPLE LOCATION

This study focuses on both the Los Molles and the Las Lajas formations within the Cuyo Group of the Neuquén Basin south of Zapala. Coarse to medium sand size sandstones were collected from the Los Molles Formation (LM2) close to La Jardinera area and the Las Lajas Formation (VR-5A, -3A, -1819, -30, -8) at Lohan Mahuida (Figure 5.1 and 5.2). The Las Lajas Formation samples were collected vertically across exposed clinothems that preserved the prograding deltaic facies. The Los Molles Fm. in La Jardinera area records a deep-water slope to basin floor succession with abundant turbidite-filled channels transitioning northwards into sand-rich basin-floor submarine fans [*Vann*, 2013; *Tudor*, 2014; *Shin*, 2015]. This is a clinoformed deepwater succession with amplitude of 300-400 m, which connected southwards to the Las Lajas fluvial to shallow-marine shelf system. The Las Lajas shelf system at Lohan Mahuida has been interpreted as a mixed-energy deltaic system [*Rossi and Steel*, 2016], with increasing fluvial dominance landwards towards Los Molles area to the east [*Kurcinka*, 2014]. The Las Lajas Formation here preserves a *ca.* 600 m thick deltaic progression that is exceptionally sand-rich, with little mud preserved, due to the strong reworking of tidal currents impinging onto the area. *Rossi and Steel* [2016] argued that this is likely due to the fact that this deltaic system was located on the downthrown side of a tectonic element, causing more subsidence, and an irregular coastline morphology.

DETRITAL ZIRCON AND APATITE GEO- AND THERMOCHRONOLOGY

Detrital zircon (DZ) U-Pb geochronometry is a powerful and versatile tool for unraveling sediment provenance and basin source-to-sink histories [*Dickinson and Gehrels*, 2008; *Gehrels*, 2010; *Gehrels*, 2014]. DZ provenance analysis is based on the correlation of detrital zircon U-Pb

ages with the zircon crystallization history of the source terranes [e.g. *Gehrels*, 2014]. These data can help with the reconstruction of drainage basin evolution, paleogeography, and maximum depositional ages [e.g., *Dickinson and Gehrels*, 2009b]. However, the identification of DZ U-Pb age provenance signals can be hampered by protracted tectonic histories where sediment recycling and reallocation can lead to non-unique and hence non-diagnostic age distributions. These ambiguities in DZ U-Pb based provenance reconstructions can potentially be overcome by combining crystallization age constraints (U-Pb) and cooling/tectonic history constraints based on (U-Th)/He on the same detrital grains.

Single grain zircon (U-Th)/(He-Pb) double dating has noticeably help reduced sediment provenance uncertainties by providing source area low-temperature thermal history constraints that link detrital zircon records to the regional deformational history [*Reiners et al.*, 2005b]. Furthermore, (U-Th)/(He-Pb) double dating can be used to determine (1) first-cycle volcanic zircon contributions (DZ U-Pb=ZHe age) and (2) depositional lag time - difference of youngest non-volcanic ZHe age and depositional age – to elucidate the syn-depositional hinterland thermal and tectonic evolution, including the timing and magnitude of cooling in the denuding source regions [e.g. *Rahl et al.*, 2003; *Reiners et al.*, 2005b; *Reiners et al.*, 2005a; *Filleaudeau et al.*, 2012; *Saylor et al.*, 2012a; *Painter et al.*, 2014]. (U-Th)/He thermochronometry is based on the ingrowth of helium from the radioactive decay of U, Th, and Sm and characterized by closure temperatures (Tc) for apatite of 55-70 °C and zircon of ~180 °C [*Farley*, 2000; 2002; *Farley and Stockli*, 2002; *Reiners et al.*, 2002; *Reiners*, 2005]. Mineral-specific helium diffusion kinetics in apatite and zircon are modulated by grain size and radiation damage [*Farley*, 2000; *Reiners and Farley*, 2001; *Reiners et al.*, 2002; *Shuster et al.*, 2004; *Farley*, 2007; *Guenthner et al.*, 2013]. These relatively low thermal sensitivities of apatite and zircon (U-Th)/He dating allow for the

quantitative reconstruction of upper-crustal thermal histories and reconstruction of tectonic exhumation and basin burial. Given their presence in variable lithologies, their resilience to mechanical or chemical decay, and the possibility of double-dating them by U-Pb and (U-Th)/He methods makes them powerful tools to investigate causal, temporal, and spatial source-to-sink linkages.

Zircon U-Pb LA-ICP-MS Methodology

Provenance signatures based on zircon U-Pb crystallization ages were determined by depth-profiling using a PhotonMachine Analyte G.2 Excimer laser and Thermo Element2 ICP-MS. Depth-profile analysis comprises ablation of a 30 μm diameter spot at 10Hz for 300 shots, producing a ~16 μm deep ablation volumes of unpolished, tape-mounted randomly-selected detrital zircon grains in a large-volume Helex sample cell. The ablated aerosol is transported by He gas (0.5 L/min) to a Thermo Element2 single-collector magnetic-sector ICP-MS. This method is particularly advantageous as it allows for depth-age profiling of the outer ~16 μm of the zircon grain permitting the recovery of multiple zircon growth zones/ages from a single zircon [*Stockli and Stockli*, 2013]. For elemental and down-hole fractionation corrections, GJ1 zircon was used as the primary reference standard [*Jackson et al.*, 2004]and Pak1 (in-house zircon standard - 42 Ma from Pakistan) was used as secondary reference standard. The isotopic data was reduced using Iolite data reduction software and VizualAge [*Paton et al.*, 2011; *Petrus and Kamber*, 2012]. The best DZ U-Pb ages were selected based on age U-Pb isotopic system precision and discordance percentage. Ages presented are $^{206}Pb/^{238}U$ ages for zircons younger than 1.2 Ga and $^{207}Pb/^{206}Pb$ ages for zircons older than 1.2 Ga [*Gehrels et al.*, 2008]. All ages reported use 2σ absolute propagated uncertainties, $^{207}Pb/^{206}Pb$ ages are less than 30% discordant,

and $^{206}Pb/^{238}U$ ages are less than 10% discordant [*Gehrels*, 2011]. The discordance reported is calculated with the $^{206}Pb/^{238}U$ and $^{207}Pb/^{235}U$ ages if < 1,200 Ma and the $^{206}Pb/^{238}U$ and $^{207}Pb/^{206}Pb$ ages if > 1,200 Ma. For each sample, ~120 detrital zircons were randomly selected for analysis to obtain a statistically representative provenance dataset that is capable of resolving all major age components (>5%) of a sample's zircon population at a 95% confidence level [*Vermeesch*, 2004]. All isotopic data and ages are reported in Table 2d, 3d and 4, Appendix A.

Zircon and Apatite (U-Th)/He Dating Methodology

In addition to the DZ U-Pb dating, this study undertook (U-Th)/He dating (ZHe) to further refine the provenance signatures, identify syn-depositional tectonic exhumation, and elucidate the interplay between hinterland exhumation and basin evolution. For ZHe double dating, grains were selected from the main dominant DZ age components found in each sample, their discordance (<10%), as well as ZHe analytical considerations such as size (>60 μm), lack of inclusions and fractures. After morphometric characterization, individual selected zircons were wrapped in Pt foil packages laser heated (~1300 °C) using a PhotonMachine 35W diode laser inside in an ultra-high vacuum stainless steel extraction line. Extracted He spiked with ^{3}He for isotope dilution, cryogenically purified, and analyzed using Blazers Prisma QMS-200 quadrupole mass spectrometer. Zircon degassing was repeated until the He extraction yields were <1%. The degassed zircons were retrieved and removed from the Pt packages, spiked with an isotopically enriched ^{235}U-^{230}Th-^{149}Sm tracer solution, and dissolved using a two-step HF-HNO_3 and HCl pressure vessel digestions for nearly a week. The resulting solutions were analyzed by solution ICP-MS analysis using a Thermo Element2 and the data was reduced using Helios software. All zircon uncertainties are 8% (2σ) based on intra-laboratory FCT age variance

[*Reiners et al.*, 2002].

In addition, apatite (U-Th)/He dating was carried out to elucidate the post-depositional thermal history. For this purpose, euhedral, inclusion- and fracture-free, apatite of sufficient size (>70μm) were hand-picked using a Nikon hybrid stereo-petrographic microscope (180x max). Similar to zircon, apatite were wrapped in Pt foil, laser degassed, cryogenically concentrated and purified, and analyzed by noble gas quadrupole mass-spectrometry. Apatite samples were laser heated (~1050°C) twice (i.e. re-extracted) to ensure complete degassing. After He analysis, apatite were spiked with isotopically enriched ^{235}U-^{230}Th-^{149}Sm tracer and dissolved in HNO_3 at 90 °C for 1 hour and diluted with purified MilliQ water to 5% HNO_3 for analysis solution ICP-MS. All U-Pb and (U-Th)/He zircon age analyses on Las Lajas and Los Molles samples were carried out in the UTChron Geo-Thermochronometry Laboratory at the University of Texas at Austin. The zircon and apatites were attained from standard mineral separation that involves sample crushing, grinding, water table, magnetic separation and heavy liquids processing.

RESULTS

Las Lajas and Los Molles Detrital Zircon U-Pb ages

The DZ U-Pb age distributions samples from the Las Lajas and Los Molles Formations range in age from Precambrian to Middle Jurassic and show no distinguishable differences in DZ U-Pb age components, with both units dominated by two main DZ U-Pb age modes: Permian-Triassic and Early-Middle Jurassic modes (Figure 5.3).

Five samples from the Las Lajas Formation (VR-5A, -3A, -1819, -30, -8) were analyzed for DZ U-Pb age totaling 489 U-Pb ages (Figure 5.3 and Table 5.1). In these samples, the most DZ U-Pb age components are Early Jurassic (28-18.5%), Cisuralian (Permian) (22-13.3%), Late

Triassic (18.5-7.3%), and Guadalupian (Permian) (18-6.4%) in age as well as subordinate age components of Middle Jurassic (15.9-1.5%) and Lopingian (Permian) (10.2-3.7%) DZ U-Pb ages and minor Pennsylvanian (7.9-3.1%), Early Triassic (8.5-0.8%), and Middle Triassic (6.2-2.4) DZ age components. Mississippian DZ U-Pb ages represent <2%, Devonian <4%, Cambrian <1.2%, and Precambrian 2.8-1.6%. The maximum depositional ages (MDA) from the Las Lajas Formation was determined by calculating the weighted average of the three youngest concordant U-Pb zircon ages, yielding a MDA of 159 ± 11 Ma (MSWD 1.9) (Figure 5.3). These U-Pb ages represent first-cycle volcanic zircons with indistinguishable double-dated ZHe ages.

DZ U-Pb ages (n=118) for Los Molles Formation are mostly of Early Jurassic (25.4%) and Cisuralian (23.9%), with subordinate Late Triassic (9.9%) and Middle Jurassic (9.9%) DZ U-Pb ages as well as Lopingian, Guadalupian, and Early Triassic each contributing about ~5.5% of the DZ U-Pb ages. Minor contributions of Middle Triassic and Carboniferous through Precambrian DZ U-Pb ages all represented <4% of the total U-Pb DZ ages (Table 5.1). The maximum depositional ages (MDA) from the Los Molles yielded an estimate of 166.5 ± 2.3 Ma (MSWD 0.24) (Figure 5.3). These zircons constraining the MDA are first-cycle volcanic zircons as they yielded DZ U-Pb ages that are indistinguishable from double-dated ZHe ages.

Las Lajas and Los Molles Detrital Zircon and Apatite (U-Th)/He ages

The DZHe ages for the Los Molles and Las Lajas Formations ranged mainly from Triassic to Jurassic in age with peaks in the Late Triassic, Late Triassic-Early Jurassic, and Late Jurassic (Figure 5.4 and 5.5). The Las Lajas Formation DZHe age population (n=45) is comprised largely of Late Triassic (36%), Early Jurassic (22%), and Late Jurassic (16%) DZHe ages with minor Cisuralian-Guadalupian (~9%), Middle Triassic (~7%), and Middle Jurassic

(~7%) age components. The Los Molles Formation DZHe ages (n=27) yielded mostly Early Jurassic (45%), Late Triassic (33%), and Late Jurassic (19%) DZHe ages. Overall the DZHe ages for the Los Molles and the Las Lajas Formations display similar dominant age components (Table 5.2).

Apatite (U-Th)/He ages obtained from samples from the Las Lajas and Los Molles Formations exhibit ages that are significantly younger than the age of Late Jurassic age of deposition and the all the DZHe ages. The AHe ages form the Los Molles Formation recorded Late Cretaceous to Early Paleocene ages (~79-57 Ma), whereas the Las Lajas Formation yielded Late Eocene to Middle Miocene (~37-16 Ma) AHe ages (Figure 5.4).

DISCUSSION

The Los Molles and Las Lajas Formations Stratigraphic Age Constraints

Detrital geochronology has been extensively used to refine chronostratigraphic constraints using first cycle volcanic zircons to provide maximum depositional ages (MDA) for siliciclastic deposits devoid of age-diagnostic fossils [*Fedo et al.*, 2003; *Dickinson and Gehrels*, 2009a]. The Cuyo Group spans from Pliensbachian to Callovian in age as constrained by ammonites in the deeper marine portions of the Los Molles Formation that appear to be time-correlative to the Las Lajas and Challaco Formations [*Riccardi and Westermann*, 1984; *Riccardi*, 1988; *Riccardi et al.*, 1990a; *Riccardi et al.*, 1990c; *Riccardi et al.*, 1990b; *Kamo and Riccardi*, 2009]. However, no biostratigraphic age constraints are available for the siliciclastic portions of the Cuyo Group deposits exposed SE of Aluminé.

The sample of the Los Molles Formation from the La Jardinera area yielded a MDA of 166.5 ± 2.3 Ma (MSWD 0.24) that is in overall agreement with the Early to Middle Jurassic

ammonite biostratigraphy [*Zavala and Riccardi*, 1996] albeit narrowing the likely age to Bathonian-Callovian. The Las Lajas Formation at Lohan Mahuida yielded a MDA of 159 ± 11 Ma (MSWD 1.9) (Figure 5.4) suggests a similar Middle to even Late Jurassic age that is also at the lower end of the biostratigraphic correlation or even younger. The MDA constraints place the Los Molles and Las Lajas Formations exposures from the upper stratigraphic portion of Cuyo Group into the Middle Jurassic and not into the Early Jurassic. These MDA constraints represent some of the first absolute chronostratigraphic ages for the Las Lajas and Los Molles Formations in this area. It is noteworthy that a recent DZ U-Pb study on the stratigraphically higher Tordillo Formation also revealed concordant MDA constraints implying a younger Berriasian age rather than Tithonian as previously considered [e.g., *Naipauer et al.*, 2012]. The DZ U-Pb ages for the Tordillo and Las Lajas Formations revise the depositional ages to slightly younger ages and clearly show the power and resolution of DZ U-Pb based MDA constraints and the presence of an active arc providing volcanic zircons into the basin.

Detrital Zircon U-Pb Provenance Sources

The DZ U-Pb ages for both the Los Molles and Las Lajas Formations are dominated by Early-Middle Permian, Late Triassic, and Early-Middle Jurassic DZ U-Pb age components with subsidiary Paleozoic to Precambrian DZ ages (Figure 5.3). The Permian to Early Triassic DZ U-Pb age components are inferred to be sourced from the Choiyoi Group, a massive rhyolitic ignimbrite deposit of the same age [*Rapela and Kay*, 1988; *Kay et al.*, 1989; *Uliana et al.*, 1989; *Horton et al.*, 2016]. The Late Triassic and Early-Middle Jurassic DZ U-Pb ages overlap in age with early Andean magmatic arc sources formed in back-arc magmatic centers during Aluk Plate subduction beneath South America [*Spalletti et al.*, 2008; *Naipauer et al.*, 2012]. Alternatively,

these early Mesozoic Andean magmatic arc ages could also come from pre-Cuyo Group inverted half-grabens as they contain Permian to Early Jurassic volcanic rocks [e.g., *Vergani et al.*, 1995; *Legarreta and Uliana*, 1996; *Franzese et al.*, 2006; *Mosquera and Ramos*, 2006]. The Jurassic DZ U-Pb age components span the entire Early and Middle Jurassic and potentially early-Late Jurassic and imply sediment supply from western Andean magmatic arc provinces to the continental shelf.

The oldest Permian to Precambrian DZ U-Pb ages are likely derived from igneous-metamorphic basement. Permian DZ U-Pb ages have been associated with the Colohuincul Complex, Piedra Santa and Patagonian massif immediately to the south of the study area [e.g., *Naipauer et al.*, 2012]. The Precambrian-Cambrian DZ U-Pb ages potentially reflect a Cuyania, Chilenia(?) and Pampean terranes derivation. The Cuyanian terrane contains Precambrian DZ U-Pb ages believed to have originated from Laurentian Granite-Rhyolite (1.5-1.3 Ga), Grenville-Sunsás basement (1.3-1.0 Ga), and Cuyania rifting related magmatism (0.6-0.5 Ga) [e.g., Sierra de Pie de Palo strata in the San Rafael Block: *Naipauer et al.*, 2010; *Horton et al.*, 2016]. Another potential source for late Mesoproterozoic and Neoproterozoic-Cambrian ages is the Pampean terrane east of the Cuyanian terrane [e.g., *Horton et al.*, 2016 and references therein]. Although, no zircons U-Pb ages have been obtained from Chilenia basement, there is indirect DZ evidence found on late Paleozoic accretionary prisms deposits in Chile that contain late Neoproterozoic- early Cambrian DZ U-Pb ages (580-530 Ma) that are thought to have been derived from erosion of the Chilenia terrane after its collision with the Pacific margin of Gondwana [*Álvarez et al.*, 2011]. The similarities in DZ U-Pb ages make the Cuyania and potentially the Chilenia and Pampean terrane the most likely sources for the Precambrian DZ U-Pb ages in the Los Molles and Las Lajas Formations. Rare outcrops of the North Patagonian

Cordilleran crystalline basement have yielded zircon U-Pb ages that are not older than Early Carboniferous [*Basei et al.*, 1999], implying that no Precambrian-Cambrian DZ U-Pb ages likely originated from the North-Patagonian Cordillera crystalline basement. This would also imply that a S-SW directed drainage system transported sediment derived from the Cuyania, Pampean, and/or Chilenia terranes into the southern parts of the Neuquén basin prior to or potentially during Cuyo Group deposition.

Detrital Zircon (U-Th)/(He-Pb) ages and inferred provenance cooling history

Single zircon (U-Th)/(He-Pb) double dating analysis has the potential to both, better fingerprint provenance source terranes, as well as, differentiate between sources of similar zircon U-Pb ages by yielding both crystallization and cooling age information for the same grain. Furthermore, it is useful in arc settings to distinguish between tectonically cooling and volcanic first-cycle zircons [*Saylor et al.*, 2012b] and thus helping to further elucidate the provenance in light of its deformation and sediment recycling history [e.g., *Fosdick et al.*, 2015]. This study (U-Th)/(He-Pb) double dated 45 zircons from the Las Lajas Formation and 27 zircons from the Los Molles Formation to relate basin fill to the overall hinterland exhumational and tectonic history. Based on non-volcanic DZHe ages in the Los Molles and Las Lajas Formations, three significant cooling events, can be identified that can be related to tectonic episodes in the evolution of the Neuquén embayment. These middle Triassic, Triassic-Jurassic, and Middle-Late Jurassic DZHe age components (Figure 5.5) can be attributed sources reset during extensional collapse of intra continental orogenic wedges (middle Triassic) and to the earliest onset of Neuquén rifting during Pangea breakup (Triassic-Jurassic). The third mode of non-volcanic DZHe ages (Middle-Late Jurassic) is indistinguishable from the depositional age and clearly implies very rapid cooling

and large-magnitude tectonic exhumation during deposition of the Los Molles and Las Lajas Formations.

Zircon (U-Th)/(He-Pb) double dated ages show convincingly the record of Permian-Triassic cooling and unroofing of Late Carboniferous to Precambrian igneous-metamorphic basement (Figure 5.6). The abundance and reproducibility of Permian-Middle Triassic DZHe ages appear to bracket the timing of cooling and exhumation related to extensional collapse of the Sierras Australes, Sierra Grande, Precordillera, Sierra Pintada, and South Patagonia orogenic belts around ~235 Ma. These DZHe also imply that the basement sources were exhumed to shallow crustal levels (<5 km) prior Late Triassic-Early Jurassic Pangean rifting and resided there or near the surface prior to deposition of the Cuyo Group. The Late Triassic-Early Jurassic DZHe ages record exhumation of Choiyoi basement and minor pre-Choiyoi sources, matching cooling related to footwall exhumation and half-graben formation in the Neuquén Basin during Pangean rifting (Figure 5.6). Lastly, the Middle-Late Jurassic short-lag time ZHe ages demonstrate syn-depositional rapid tectonic exhumation of hinterland source terranes characterized by Middle Triassic to late Carboniferous DZ U-Pb ages, implicating the Choiyoi (~230-290 Ma) and Colohuincul Formation (late Carboniferous DZ U-Pb ages) as potential sources (Figure 5.6).

Evidence for Middle Jurassic Inversion

Although intra-basin inversion in the Huicul Ridge area of the southern Neuquén Basin has previously been documented during Cuyo Group deposition [*Pángaro,* 2006; *Silvestro and Zubiri,* 2008; *Pángaro et al.*, 2009], its potential influence on sediment dispersal and recycling has not been addressed. The lack of published provenance data for the southern Neuquén Basin

has so far precluded the estimation of relative contributions of active volcanism and source-to-sink reconstruction during the post-rift thermal sag phase. The DZ U-Pb and DZHe age spectra are remarkably similar for both the Las Lajas and Los Molles Formations (Cuyo Group) and confirm that they are part of the same Middle Jurassic shelf margin in the southern Neuquén basin and that they were fed from a similar or the same regional drainage system (Figures 5.3 and 5.5). The DZ U-Pb provenance data suggest that the Cuyo Group shelf margin system SE of Aluminé is predominantly sourced from Choiyoi basement and Late Triassic-Middle Jurassic arc volcanic rocks with subordinate pre-Choiyoi igneous-metamorphic basement input. Late Triassic-Early Jurassic DZHe ages further show that the Choiyoi basement and older igneous-metamorphic basement sources underwent rapid cooling and exhumation during Pangea rifting (Figure 5.6). This appears to significantly narrow the provenance to mostly intra-Neuquén Basin extensional half-grabens and associated extensional basins (pre-Cuyo group) containing Early Jurassic volcanic, Choiyoi, and igneous-metamorphic basement zircons.

DZ U-Pb ages from the Early Jurassic "lower" Cuyo Group strata from the Malargüe region show predominantly Choiyoi basement (300-240 Ma) with significant Triassic arc (240-200 Ma) DZ U-Pb contributions, but little to none Jurassic DZ U-Pb ages [*Horton et al.*, 2016]. These DZ U-Pb ages were interpreted to have been derived from Choiyoi basement at the basin margin and from Triassic-age strata deposited in the post-rift thermal sag [*Horton et al.*, 2016]. The apparent discrepancy in DZ U-Pb age spectra between Cuyo Group strata in the northern and southern Neuquén Basin advocates for different drainage configurations from the northern and southern margins of the basin, although this appears to conflict with models invoking sedimentation sourced uniformly from the adjacent Choiyoi during post-rift thermal sagging. The lack of Early Jurassic DZ U-Pb ages in older Early Jurassic Cuyo Group strata and their

occurrence on Middle Jurassic "upper" Cuyo Group suggests local sourcing from adjacent exposures of the pre-Cuyo group (potentially Choiyoi Group), containing Late Triassic-Early Jurassic volcanic and Choiyoi basement sedimentary strata [e.g., *Vergani et al.*, 1995; *Legarreta and Uliana*, 1996; *Franzese et al.*, 2006; *Mosquera and Ramos*, 2006]. The former is also supported by the equal DZ U-Pb modal distributions between the Cuyo Group (Los Molles and Las Lajas Formations) and the younger Tordillo Formation. The Triassic to Jurassic DZ ages encountered in the Late Jurassic Tordillo Group have been repeatedly attributed to inversion in the Neuquén Basin or Huincul Ridge area [*Naipauer et al.*, 2012; *Horton et al.*, 2016]. The MDA constraints and double-dating dating evidence suggest that structural inversion likely played a crucial role and has significant impact on sediment provenance and dispersal well before Berriasian Tordillo Group deposition at least by Middle Jurassic time in the Huincul Ridge region. Inversion likely also played a role in the upward coarsening trend in the stratigraphy and the northward progradation of coarse clastic facies in the "upper" Middle Jurassic Cuyo Group. Lastly, the observed mode of Carboniferous to Precambrian DZ U-Pb ages with Permian-Triassic DZHe ages are most easily explained by recycling of intra-basin syn- or post- orogenic collapse deposits, further corporation a pre-Cuyo provenance.

DZHe ages indistinguishable from depositional age from zircons with Middle Triassic to Carboniferous U-Pb ages clearly required active syn-depositional deformation in the hinterland and unroofing of Choiyoi and igneous-metamorphic basement. However, the details surrounding this tectonic event requiring >5-6 km exhumation during Middle Jurassic as published seismic data and reconstructed cross-sections along the southern Huincul Ridge area [e.g., *Mosquera and Ramos*, 2006], inside the Neuquén Embayment, do not support vertical displacements of that magnitude along the Huincul Ridge structures. The DZ U-Pb age signature of the rapidly

exhumed source (Middle Triassic to Carboniferous), aforementioned structural evidence, and paleocurrent data suggest a predominant sediment transport and derivation of detritus from an area outside the basin embayment to the S-SE.

Two possible scenarios might best explain the short depositional lag time DZHe ages. The first one involves substantial exhumation by transpressional deformation along the southern margin of the Neuquén Embayment - possibly on the Patagonian Massif. The driver for this deformational regime, which is also controlling deformation and inversion along the Huincul Ridge inversion, is the sinistral convergence of the Aluk Plate under the South American Plate [*Mosquera and Ramos*, 2006]. This would require rapid exhumation controlled by structures along southern precursors of the major Huincul Ridge inversion. However, so far no actual record of major contractional and transpressional deformation accommodating multiple kilometers of throw along the southern basin margins or in the northern Patagonian massif has been documented for the time during Cuyo deposition. The only hard evidence for sinistral convergence comes from seismic sections that show inversion of half grabens within the basin that appears to have occurred prior to and during deposition of the Los Molles and Las Lajas Formations [e.g. *Mosquera and Ramos*, 2006].

An alternative second scenario involves the inversion and exhumation of the pre-Cuyo grabens as a consequence of both boosted erosion and enhanced cooling through rifting thermal sagging during dynamic exhumation.

Post-depositional thermal history and Andean exhumation

Zircon and apatite (U-Th)/He data put bounds on the magnitude of post-depositional burial and shed light on the basin thermal history and subsequence exhumation during Andean

shortening. The presence of unreset detrital ZHe ages provides constraints on the post-deposition thermal evolution of the basin. Since the DZHe ages are equal (within error) and older than the depositional age and a fraction of double dated (U-Th)/He zircon grains recorded first-cycle volcanic grains, it can be unequivocally be concluded that post-depositional temperatures never reached the ZHe partial retention zone and remained <140 °C [*Wolfe and Stockli*, 2010]. This also appears to be plausible as the samples were collected onto the Huincul Ridge (Figures 5.1 and 5.2), a long-live deformational structure responsible for multiple intra-basinal unconformities, such as the [intra-Callovian, Malm, Valanginian, Senonian unconformities; *Grimaldi and Dorobek*, 2011], limiting the total burial overburden and making resetting of DZHe ages unlikely.

Apatite (U-Th)/He ages were measured for two samples from the Las Lajas Formation (VR08 and VR30) and one sample from the Los Molles Formation. The AHe ages are much younger than the stratigraphic ages and are clearly reset, yielding cooling ages as young as Miocene and Paleocene, respectively (Figure 5.7). The Las Lajas Formation samples yielded early Miocene AHe ages, while the stratigraphically higher sample (VR30) gave two AHe ages older than Miocene (Oligocene and late Eocene). The AHe ages suggest that both the Las Lajas and Los Molles units were buried to temperatures likely in excess of 70-80 °C or depths greater than 2-3 km, assuming a 25 °C/km geothermal gradient and a surface temperature of 10 °C, after deposition and before Andean contraction. More importantly, the AHe ages suggest that the Los Molles Formation in La Jardinera area and the Las Lajas Formation in the Lohan Mahuida area experienced distinct episodes of cooling in response to Andean shortening. On the basis of their structural positions, AHe ages in the Lohan Mahuida and La Jardinera area registered different discrete episodes of Cenozoic faulting during Andean contractional deformation. The sample

from the Los Molles Formation records Late Cretaceous to Paleocene cooling in the Rahue hanging wall (~57-79 Ma). In contrast, reproducible AHe ages (~16 Ma) from the Las Lajas Formation record Miocene cooling in response to unroofing and exhumation in the hanging wall of the Mallin de Ibañez and/or Lonqueo thrust faults. While only based on very limited AHe data, the systematic difference in ages suggests an eastward transfer of thrust-related deformation during the Miocene.

CONCLUSIONS

(1) New chronostratigraphic constraints based on DZ U-Pb maximum depositional ages for siliciclastic intervals in the Los Molles and Las Lajas Formations of the Cuyo Group exposed in the La Jardinera and Lohan Mahuida area indicate a Middle to Late Jurassic depositional age.

(2) The DZ U-Pb and DZHe age data from both formations confirm they were part of the same Middle Jurassic shallow-to-deep marine shelf margin system and were potentially sourced from the same drainage system.

(3) Middle Jurassic shelf margin sedimentation was largely dominated by Permian-Triassic and Late Triassic-Middle Jurassic DZ U-Pb age modes, indicating derivation and provenance predominantly from the Choiyoi Group, Late Triassic to Middle Jurassic Andean volcanic arc sources, and/or the pre-Cuyo or Early Jurassic Cuyo strata. Minor Carboniferous to Precambrian DZ U-Pb ages were originally derived from Patagonian, Chilenian, Cuyanian and or Pampean (?) terranes of the same age.

(4) The zircon (U-Th)/(He-Pb) double dating enhanced sediment provenance analysis in Cuyo Group and provides important new constraints on the source terranes cooling histories.

Carboniferous and older DZ U-Pb ages derived from igneous and metamorphic terranes cooled during the formation of intra-continental orogenic belts and their subsequent collapses (e.g. Sierras Australes, Sierra Grande, Precordillera, Sierra Pintada and South Patagonia). DZ U-Pb ages sourced from Choiyoi Group exhibit DZHe ages that record rapid Middle-Jurassic cooling and exhumation related to the early onset of Neuquén Basin rifting during Pangea breakup. Carboniferous to Middle Triassic DZ U-Pb age source terranes recorded a large-magnitude deformation and unroofing event during deposition.

(5) The tectonic driver behind this magnitude exhumation required by the depositional lag time DZHe ages that indistinguishable from depositional age appears to be related to sinistral transpression, but the specific structures capable of such large-magnitude syn-depositional deformation remain enigmatic and elusive.

(6) Late Triassic and Early Jurassic DZ U-Pb ages appear to be locally sourced from the adjacent exhuming pre-Cuyo Group during half-grabes inversion in light of (1) their absence in the Lower Jurassic Cuyo Group [*Horton et al.*, 2016] and reemergence in the Middle Jurassic Cuyo Group, (2) the DZ U-Pb modal distribution that is similar to the Late Jurassic Tordillo Group, which has been associated with structural inversion in the Neuquén Basin [*Naipauer et al.*, 2012; *Horton et al.*, 2016], and (3) published seismic section that show clear evidence for syn-depositional pre-Cuyo Group inversion [*Pángaro*, 2006; *Silvestro and Zubiri*, 2008].

(7) The MDA and DZ U-Pb-DZHe ages constraints the influence of Jurassic structural inversion on sediment sourcing and dispersal in the southern Neuquén Basin as early as Middle Jurassic-“upper” Cuyo Group.

(8) Subsequent Cuyo Group burial in this area was to temperatures <140 °C as evidences by unreset zircon (U-Th)/He ages, while AHe ages from the same units were complete reset and cooled in Cenozoic times in response to individual faults operating during Andean deformation that played a crucial role on compartmentalizing La Jardinera and Lohan Mahuida areas basin thermal evolution in the Cenozoic.

(9) The DZ U-Pb and DZHe ages serve as ground truth and benchmark for future sediment provenance analysis that involves the Cuyo Group as potential source in the southern Neuquén basin. In addition, the apatite and zircon (U-Th)/He time-temperature constraints can strongly benefit local basin thermal evolution models.

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FIGURES

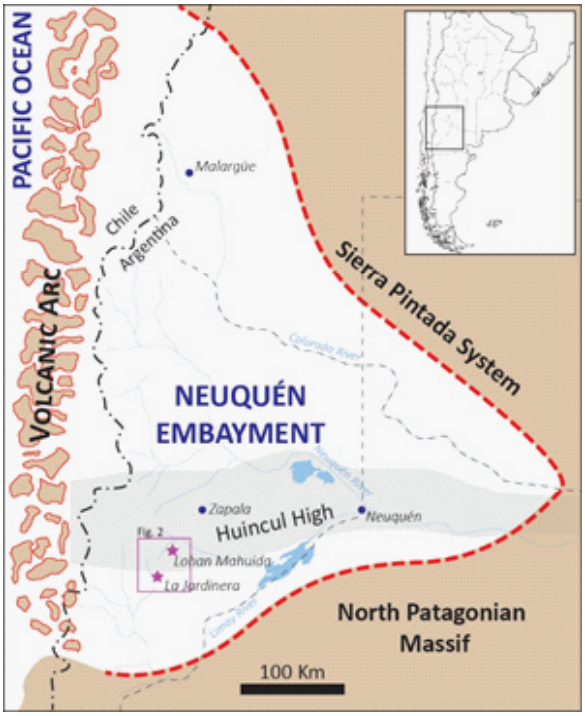

Figure 5.1. General paleogeographic map of the Neuquén embayment around the los Molles and Las Lajas depositional time. The stars indicate the samples location. In grey the area associated with Huincul inversion.

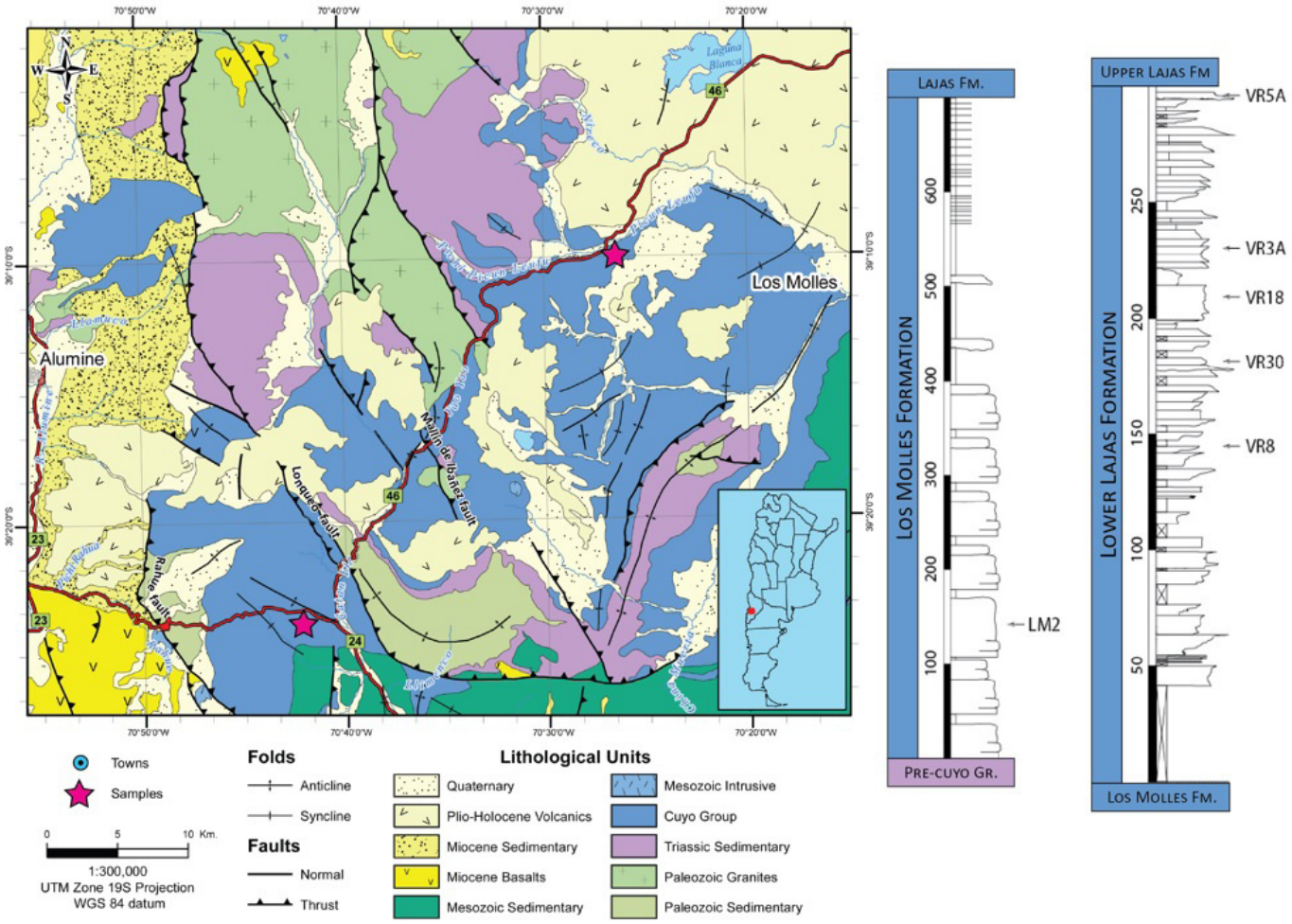

Figure 5.2. Geologic Map of the study area (Modified from Morabito et al., [2011]) and generalized stratigraphic section (modified from Rossi and Steel, [2016]) showing Los Molles and Las Lajas formation sample and stratigraphic location.

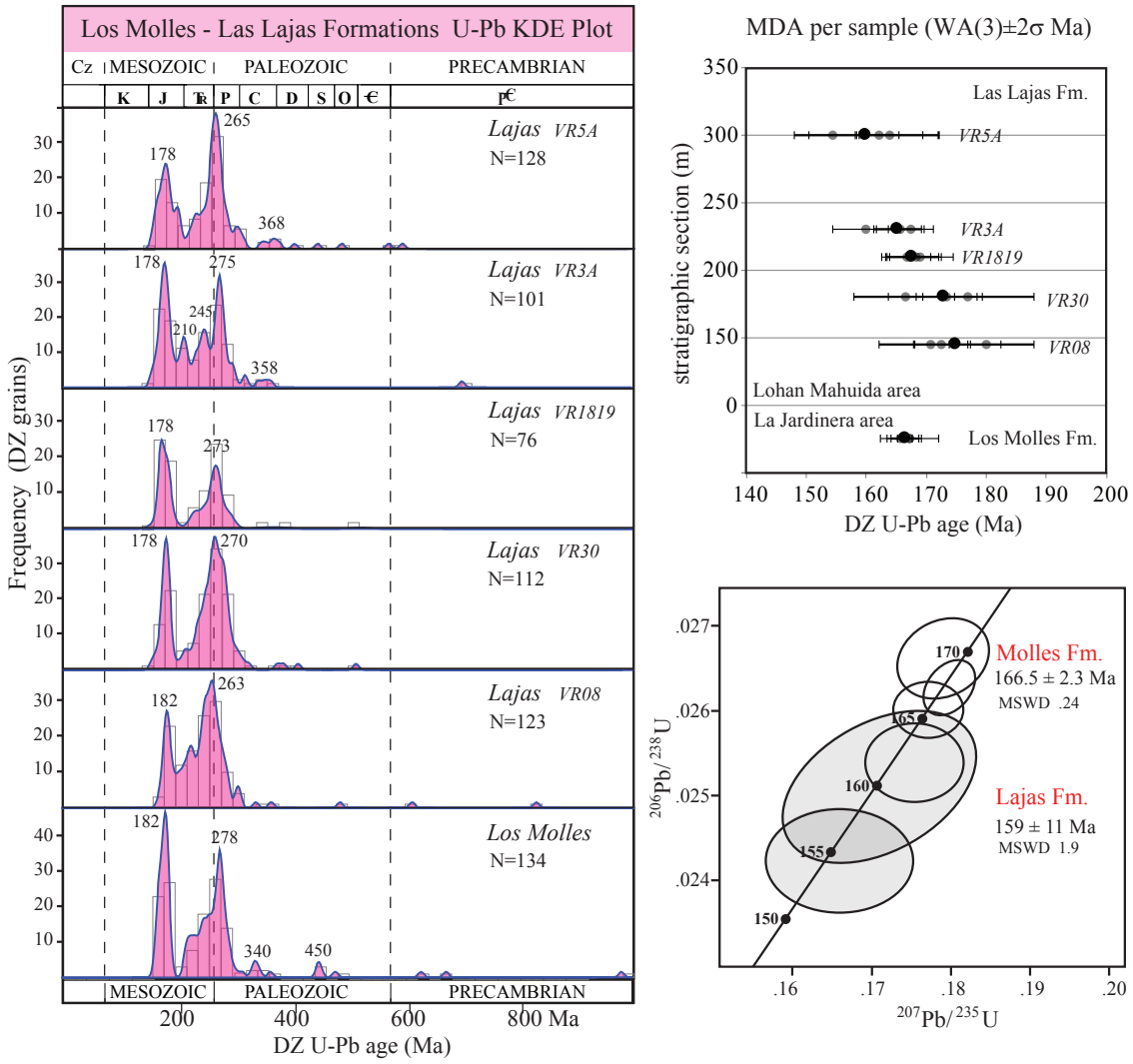

Figure 5.3. Detrital Zircon Pb206/U238 ages histograms and Vermeesch's [2012] Kernel Density plots (bandwidth 5 and a bin width of 20) for all Las Lajas and Los Molles Formation samples. The diagram in the upper right corner shows the youngest 3 DZ U-UPb ages in Concordia curve. It additionally shows the weighted average, 2 sigma errors and the MSWD for the youngest DZ U-Pb ages. In the lower right is a diagram showing the MDA evolution up stratigraphic section.

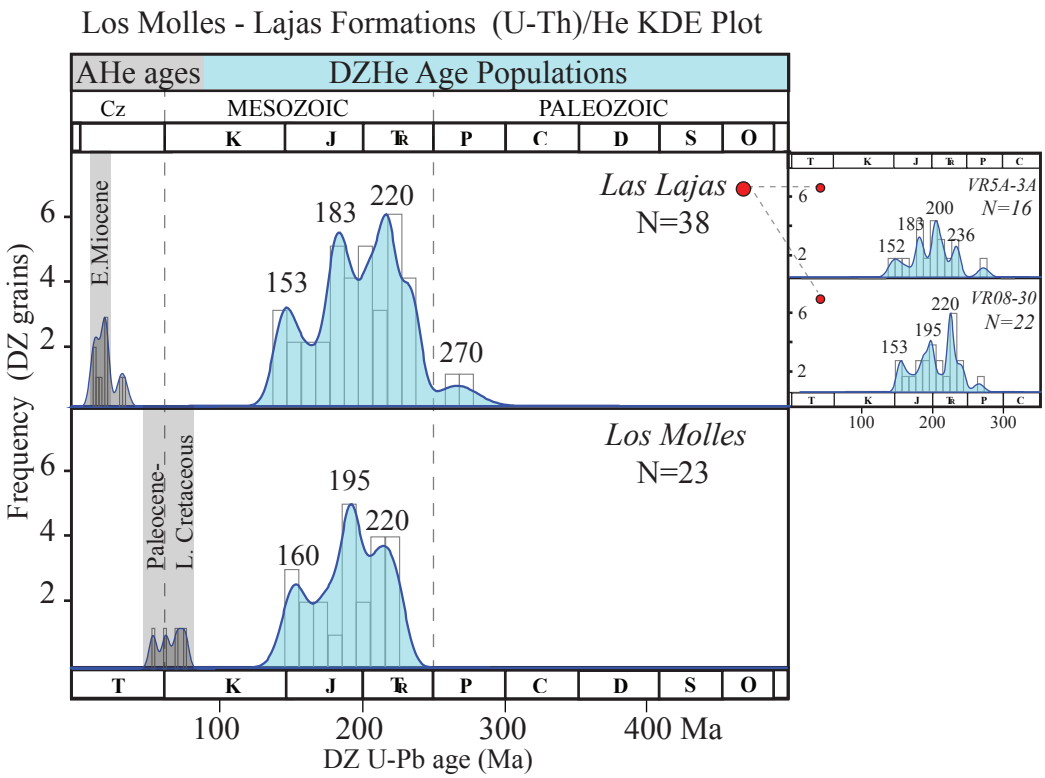

Figure 5.4. Histograms and Vermeesch's [2012] kernel density plots for all apatite (in grey) and non-volcanic detrital zircon (U-Th)/He ages (in blue) in the Las Lajas and Molles formation.

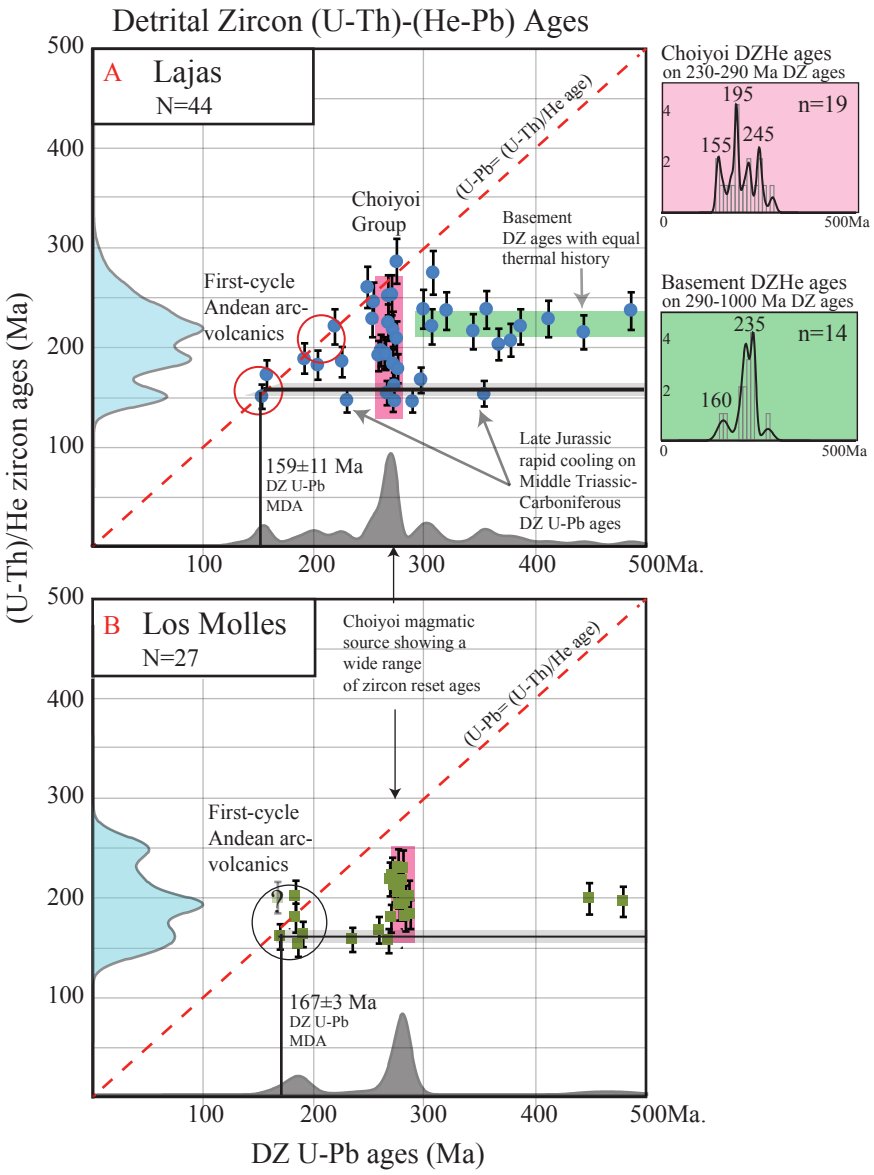

Figure 5.5. Detrital zircon double dated plots and interpretations for the (A) Lajas and (B) Los Molles formations. DZHe KDE plots from figure 4 were placed on the Y axis whereas sub sampled DZ U-Pb KDE plots in the X axis. Two additional plots (upper right, Las Lajas Formation double dated plot) were made to show distinct DZHe cooling age components on DZ U-Pb ages.

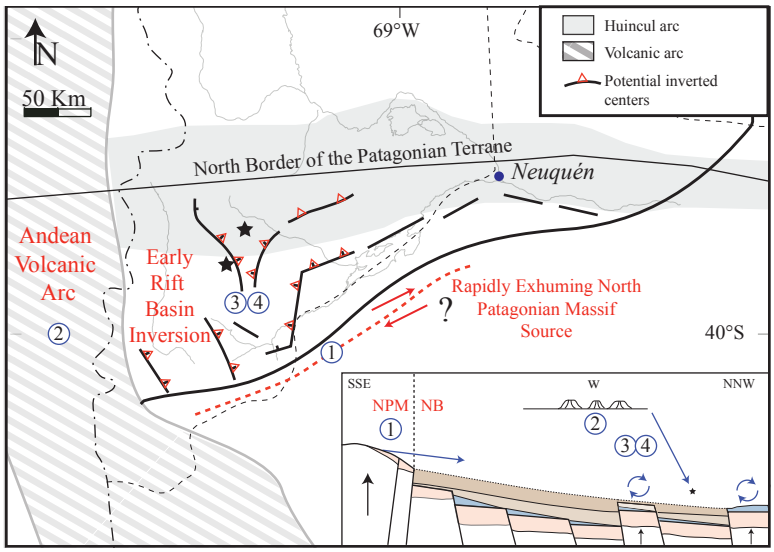

Figure 5.6. Sediment sources interpreted from DZ and DZHe ages found in the Las Lajas and Molles formations. The numbers 1-4 indicate DZ (U-Th)/(He-Pb) provinces. (1) Rapidly exhumed North Patagonian massif (Carboniferous-Triassic zircons with middle Jurassic DZHe ages), (2) Middle Jurassic volcanic-arc, (3-4) proposed inverted structures exhuming and recycling pre-Cuyo strata.

Tables

Table 5.1. DZ U-Pb age percentages

			Las Lajas Fm.					Los Molles Fm.
Period	Epoch	Age range (Ma)	VR5A (%)	VR3A (%)	VR1819 (%)	VR30 (%)	VR08 (%)	ML2 (%)
Jurassic	Late	145-164	2.3	0.9	0.0	0.0	0.0	0.0
	Middle	164-174	6.3	7.3	15.9	2.4	1.5	9.9
	Early	174-201	20.3	25.7	28.0	22.0	18.5	25.4
Triassic	Late	201-237	10.2	15.6	7.3	7.9	18.5	9.9
	Middle	237-247	4.7	5.5	2.4	5.5	6.2	2.1
	Early	247-252	0.8	3.7	4.9	6.3	8.5	5.6
Permian	Lopingian	252-260	10.2	3.7	3.7	5.5	8.5	5.6
	Guadalupian	260-272	18.0	6.4	12.2	16.5	16.9	5.6
	Cisuralian	272-299	13.3	22.0	22.0	20.5	13.8	23.9
Carboniferous	Pennsylvanian	299-323	5.5	3.7	0.0	7.9	3.1	1.4
	Mississippian	323-359	1.6	1.8	1.2	0.8	0.8	2.8
Devonian		359-419	3.2	0.9	1.2	2.4	0.8	0.7
Silurian		419-444	0.0	0.0	0.0	0.0	0.0	0.0
Ordovician		444-485	0.8	0.0	0.0	0.0	0.0	2.8
Cambrian		485-541	0.8	0.0	1.2	0.8	0.8	0.0
Precambrian		>541	2.3	2.8	0.0	1.6	2.3	4.2

Table 5.1. Percentage of DZ U-Pb ages from different geologic epochs or periods per samples. See the results section for summary.

Table 5.2. DZHe age percentages per Epoch

Period	Epoch	Age range (Ma)	Las Lajas DZHe (%)	Los Molles DZHe (%)
Jurassic	Late	145-164	15.6	18.5
	Middle	164-174	6.7	3.7
	Early	174-201	22.2	44.4
Triassic	Late	201-237	35.6	33.3
	Middle	237-247	6.7	0
	Early	247-252	2.2	0
Permian	Lopingian	252-260	2.2	0
	Guadalupian	260-272	4.4	0
	Cisuralian	272-299	4.4	0

Table 5.2. Percentage of DZ DZHe ages from different geologic epochs or periods per samples.

Appendix A: Sample Location and Zircon Isotopic Data

Table 1a: Sample Location Chapters 1,2,3, and 4

Sample ID	Latitude	Longitude	Formation Name
Canyon Mountains: Oak Creek Canyon			
11Uok01	39.35176662	-112.2846483	Mutual Fm
11Uok02	39.35353361	-112.2720952	Prospect Mtn Fm
11Uok03	39.35035134	-112.2674969	Tintic Fm
11Uok04	39.35789228	-112.2317275	Caddy Canyon Fm
11Uok05	39.35576512	-112.229538	Caddy Canyon Fm
11Uok06	39.35467992	-112.2189659	Mutual Fm
11Uok07	39.35357518	-112.2105459	Inkon Fm
Canyon Mountains: Wild Horse Canyon			
11Upc01	39.47098201	-112.2338021	upper Mutual Fm
11Upc02	39.47099132	-112.2288397	Tintic Fm
11Upc03	39.47217911	-112.2243153	Pioche Fm
11Upc04	39.4726138	-112.2259469	Tintic Fm
11Upc12	39.47243133	-112.2427264	Mutual Fm
11Upc13	39.47330497	-112.2484442	Caddy Canyon Fm
Charleston-Nebo Salient: Santaquin Road			
13SAN-01	39.925713	-111.748534	Precambrian rocks (Ybc)
13SAN-03	39.911111	-111.742222	Cambrian rocks (Cmu)
13SAN-04	39.90399063	-111.73014	Humbug Sandstone
13SAN-05	39.91003674	-111.7238451	Great Blue Limestone
Charleston-Nebo Salient: East of Provo			
KNC102612-4 Jn	40.07792	-111.3968008	Nugget Sandstone
KNC102612-1 Pdc	40.20056	-111.41743	Diamond Creek Sandstone
KNC102612-2 Pogm	40.169222	-111.4924732	Granger Mountain Formation of Oquirrh Group
KNC102612-3 lPowr	40.18517	-111.45208	Wallsburg Ridge Formation of Oquirrh Group
Canyon Mountains: Wild Horse Canyon: Canyon Range Conglomerate			
11Upc05	39.47266384	-112.2176054	Kccq4 (Cow Cyn Mbr)
11Upc06	39.474278	-112.2162	KChm3 (Wild Horse Cyn Mbr)
11Upc07	39.47438934	-112.2142843	KChm3 (Wild Horse Cyn Mbr)
11Upc08	39.48374304	-112.1824541	Kcwp9 (Pass Cyn Mbr)
11Upc09	39.48473003	-112.187071	Kcwp9 (Pass Cyn Mbr)

11Upc10	39.484124	-112.196822	Kclq8 (Leamington Cyn Mbr)
11Upc11	39.47590051	-112.2019415	Kclm5 (Leamington Cyn Mbr)
Gunnison Plateau: Chicken Creek			
13GPI-01	39.51479933	-111.736463	Sixmile Canyon Fm
13GPI-02	39.51818068	-111.7454345	bottom of the Sixmile Canyon Fm
13GPI-03	39.51815318	-111.7454169	Funk Valley Fm
13GPI-04	39.51858443	-111.7489692	Funk Valley Fm
13GPI-05	39.52198363	-111.7558659	Allen Valley (?)
13GPI-06	39.52498142	-111.7669338	Sanpete Fm
Sixmile Canyon			
13SMPR	39.21232964	-111.6369259	Price River Fm
13SM-01	39.211794	-111.64559	middle Sixmile Canyon Fm
13SM-02	39.21224071	-111.6405007	upper Sixmile Canyon Fm
13SM-03	39.204719	-111.655428	lower Sixmile Canyon Fm
13SM-04	39.202782	-111.663345	Funk Valley Fm
13SM-05	39.23155949	-111.6640472	Sanpete Fm
Hop Creek: Cedar Hills			
13PCI-01	39.77046347	-111.6425663	Sanpete Fm
13PCI-03	39.71785161	-111.6952417	Sixmile Canyon Fm
West San Rafael Swell			
13DQDU	39.33873771	-110.7399221	upper Dakota Fm
11Uccf02	39.54290729	-110.631878	lower Dakota Fm

Table 1b: Sample Location Chapters 2 and 3

Sample ID	Latitude	Longitude	Formation Name
Price River Canyon _Castle Valley, UT			
13PRUC	39.76348277	-110.8988572	Bluecastle Tongue
11Upr01	39.76096426	-110.8940862	Middle Castlegate
11Upr02	39.75668253	-110.8896454	Middle Castlegate
11Upr03	39.75361794	-110.8879281	Castlegate Sandstone
11Upr04	39.75014431	-110.8852072	Aberdeen Mbr
11Upr05	39.73889035	-110.8746964	Spring Canyon Mbr
11Upr06	39.7269774	-110.8682284	Spring Canyon Mbr
11Upr07	39.71235291	-110.8675882	Storrs Sandstone
Panther T.	39.71214	-110.86909	Panther Tongue

North San Rafael Swell, UT			
11Uccr04	39.70181267	-110.685386	Kenilworth Mbr
13EMERY	39.65233253	-110.9076366	Emery Sandstone
11Uccf03	39.54602058	-110.6614658	Emery Sandstone
11Uccf04	39.543131	-110.6593212	Ferron Sandstone
11Uccf05	39.53673318	-110.6206269	Ferron Sandstone
Sunnyside Canyon, UT			
11Uss01	39.55665076	-110.3815261	Kenilworth Mbr
11Uss02	39.56005055	-110.3752959	Sunnyside Mbr
11Uss03	39.56825525	-110.3719804	Sunnyside Mbr
11Uss04	39.57515926	-110.3712781	Castlegate Sandstone
11Uss05	39.5810421	-110.368352	Castlegate Sandstone
11Uss06	39.5864289	-110.371223	Middle Castlegate
11Uss07	39.59295865	-110.3725302	Bluecastle Tongue
Green River_Tusher Canyon Area, UT			
Bluecastle T	38.99797	-109.92252	Bluecastle Tongue
13GRT-01	39.09672249	-110.0456826	Sunnyside Mbr
13GRT-02	39.1	-110.033917	Grassy Mbr
13GRT-03	39.10001474	-110.0339261	Desert Mbr
13GRT-04	39.09767392	-110.0240706	Castlegate Sandstone
13WSUN	39.25537717	-110.2823856	Sunnyside Mbr
13WKEN	39.25607571	-110.2798708	Kenilworth Mbr
Mount Garfield, CO			
13GJR-01	39.12875	-108.386306	Rollins Sandstone Mbr
13GJCOCE-01	39.128139	-108.387667	Cozzette Mbr
13GJCO-01	39.12675	-108.391611	Concoran Mbr
Near Rangely, CO			
Loyd Sandstone	40.079217	-108.890017	Loyd Sandstone
Lower Sego Sandstone	40.201567	-108.861567	Sego Sandstone
Neslen Formation	39.944633	-108.758117	Neslen Formation
Near Meeker, CO			
13MORA-1	40.28664429	-107.6456987	Marapos Sandstone
13MEE1	40.08481795	-107.8543761	Meeker Sandstone

Table 1c: Sample Location Chapter 3

Sample ID	Latitude	Longitude	Formation Name
Near San Rafael Swell			
13DQDL	39.31945648	-110.7091745	upper Cedar Mtn
Cedar	39.19509	-110.42433	Cedar Mtn
Buckhorn	39.19375	-110.42342	Buckhorn Conglomerate
13DQM	39.32089683	-110.69117	Morrison Fm: Brushy Basin Member

Table 1d: Sample Location Chapter 5

Sample ID	Latitude	Longitude	Formation Name
Southern Neuquén Basin	**APPROX.**	APPROX.	
Los Molles Fm (ML2)	-39.397958	-70.705901	Los Molles Fm
Las Lajas Fm (VR)	-39.162864	-70.441229	Las Lajas Fm

Table 2a: Zircon U-Pb Ages And Isotopic Data: Chapters 1,2,3, and 4

Table 2a: Charleston-Nebo Salient: East and South of Provo

Sample Name:								207/235		206/238		206/207		Best age		
Grain #	[U] ppm	U/Th	207/235	2σ error	206/238	2σ error	RHO	Age Ma	2σ error	Age (Ma)	2σ error	Age (Ma)	2σ error	(Ma)	2σ error	% Discordance*
KNC01_1	157.2	2.326	1.725	0.018	0.1692	0.0016	0.46013	1017.4	6.8	1007.3	8.8	1047	12	1007.3	8.8	1.0
KNC01_2	70	0.5779	3.802	0.041	0.2715	0.0039	0.54873	1593.7	8.9	1548	20	1651	15	1651	15	6.2
KNC01_3	124.6	1.635	1.568	0.018	0.1549	0.0019	0.48539	957	7.1	928	11	1019	12	928	11	3.0
KNC01_4	72.8	0.49	1.574	0.028	0.1556	0.0021	0.65605	960	11	932	12	1012	15	932	12	2.9
KNC01_5	155.9	0.6233	0.501	0.013	0.06139	0.00075	0.18152	411.7	8.4	384	4.6	561	49	384	4.6	6.7
KNC01_6	198.6	1.304	3.372	0.031	0.2437	0.0024	0.55228	1497.5	7.2	1406	13	1629	11	1629	11	13.7
KNC01_7	70.1	1.627	1.992	0.033	0.1812	0.003	0.60658	1113	11	1073	16	1164	18	1073	16	3.6
KNC01_8	224	2.72	1.328	0.024	0.1365	0.0025	0.80943	860	11	825	14	960	17	825	14	4.1
KNC01_9	137.3	1.865	2.285	0.019	0.2026	0.0018	0.46253	1208.8	5.6	1189	9.6	1246.8	9.8	1189	9.6	1.6
KNC01_10	79.7	1.55	1.763	0.019	0.1732	0.0019	0.50148	1031.6	6.9	1030	10	1034	14	1030	10	0.2
KNC01_11	27.3	0.678	5.069	0.059	0.3081	0.0037	0.39851	1830	9.9	1733	18	1948	12	1948	12	11.0
KNC01_12	118.7	1.734	1.627	0.019	0.1586	0.0019	0.62557	981.1	7.4	950	11	1052	12	950	11	3.2
KNC01_13	83.9	1.151	3.948	0.046	0.2886	0.0045	0.71631	1625	10	1634	22	1633	15	1633	15	0.1
KNC01_14	88.4	0.633	3.946	0.062	0.2798	0.0043	0.7315	1622	13	1590	22	1663	15	1663	15	4.4
KNC01_16	144.3	1.971	1.468	0.018	0.1519	0.0019	0.57246	917	7.3	912	11	922	12	912	11	0.5
KNC01_17	87.5	0.75	3.828	0.051	0.274	0.0051	0.56203	1598	11	1564	25	1655	18	1655	18	5.5
KNC01_18	97	1.141	1.766	0.024	0.1728	0.0019	0.34443	1033.7	9.1	1027	11	1045	18	1027	11	0.6
KNC01_19	273	1.069	1.312	0.031	0.1267	0.0035	0.44514	852	14	769	20	1062	48	769	20	9.7
KNC01_19	97.4	0.549	1.444	0.042	0.1493	0.004	0.50222	906	17	897	23	962	37	897	23	1.0
KNC01_20	38	0.6292	1.686	0.026	0.1622	0.0018	0.32955	1002.5	9.9	969	10	1079	18	969	10	3.3
KNC01_21	69.8	1.572	3.866	0.036	0.2788	0.0028	0.50272	1607.2	7.3	1585	14	1645	12	1645	12	3.6
KNC01_23	62.3	1.034	2.07	0.029	0.193	0.0027	0.57332	1138.3	9.4	1137	14	1145	15	1137	14	0.1
KNC01_24	297	79	0.4962	0.0065	0.06419	0.00063	0.39768	409	4.4	401	3.8	450	15	401	3.8	2.0
KNC01_25	187	1.116	3.921	0.044	0.2834	0.0039	0.63793	1617.3	9.1	1608	19	1642	15	1642	15	2.1

KNC01_26	225	1.34	2.898	0.056	0.2071	0.0042	0.76374	1381	15	1213	22	1648	18	1648	18	26.4
KNC01_26	63.2	0.858	3.778	0.085	0.2666	0.0042	0.36837	1587	18	1523	22	1678	30	1678	30	9.2
KNC01_27	95.4	1.448	3.242	0.035	0.2509	0.0029	0.60385	1467.9	8.5	1445	15	1497	12	1497	12	3.5
KNC01_28	34.86	1.72	3.624	0.051	0.2596	0.0037	0.55469	1554	11	1487	19	1649	13	1649	13	9.8
KNC01_29	117.7	1.011	3.89	0.041	0.2754	0.004	0.64989	1611.2	8.6	1568	20	1665	16	1665	16	5.8
KNC01_30	133.5	1.134	11	0.2	0.4378	0.0071	0.88107	2521	17	2340	32	2682	13	2682	13	12.8
KNC01_31	143.2	1.214	0.3786	0.0064	0.05153	0.00057	0.26049	326.5	4.6	324.4	3.4	347	31	324.4	3.4	0.6
KNC01_32	115.6	0.4855	5.176	0.039	0.3172	0.0026	0.49566	1849.1	6.3	1776	13	1929.3	7.8	1929.3	7.8	7.9
KNC01_33	114.3	1.415	4.454	0.035	0.2939	0.003	0.51475	1722.2	6.5	1661	15	1794.7	8.6	1794.7	8.6	7.4
KNC01_34	30.2	0.817	13.46	0.25	0.505	0.011	0.89522	2710	18	2635	45	2769	17	2769	17	4.8
KNC01_35	113	1.92	1.11	0.032	0.1166	0.0028	0.87471	759	15	711	16	896	22	711	16	6.3
KNC01_36	212.7	0.658	1.226	0.092	0.0813	0.0031	0.20017	824	48	504	18	1820	140	DISC	DISC	72.3
KNC01_36	78.4	1.496	1.712	0.036	0.1674	0.0041	0.74138	1012	14	1002	24	1050	27	1002	24	1.0
KNC01_37	67.7	1.292	5.186	0.067	0.3229	0.0044	0.62538	1851	11	1803	21	1901	12	1901	12	5.2
KNC01_38	94	2.09	14.81	0.18	0.5408	0.0068	0.76308	2803	11	2786	28	2824	10	2824	10	1.3
KNC01_39	195.9	1.276	4.383	0.042	0.2946	0.0041	0.73691	1708.9	7.8	1664	21	1774	9.2	1774	9.2	6.2
KNC01_40	167	0.816	3.85	0.08	0.2751	0.005	0.82447	1604	16	1566	25	1655	16	1655	16	5.4
KNC01_41	378	4.81	3.159	0.028	0.2467	0.0027	0.76746	1447.7	6.9	1421	14	1490.7	7.5	1490.7	7.5	4.7
KNC01_42	137.2	0.7933	3.8	0.031	0.2709	0.0031	0.53882	1592.4	6.6	1545	15	1655	11	1655	11	6.6
KNC01_43	40.58	0.722	4.862	0.05	0.3124	0.0036	0.38801	1795.1	8.7	1752	17	1836	17	1836	17	4.6
KNC01_44	273	1.208	2.127	0.021	0.1929	0.0019	0.58051	1157.1	6.9	1137	10	1196	12	1137	10	1.7
KNC01_45	267	0.74	0.5207	0.0061	0.06644	0.00069	0.43158	425.5	4.1	414.6	4.2	476	18	414.6	4.2	2.6
KNC01_46	368	2.729	12.624	0.091	0.4958	0.0043	0.72583	2651.6	6.7	2595	18	2693	7	2693	7	3.6
KNC01_47	185.5	1.1362	12.354	0.087	0.4914	0.0041	0.76735	2631.3	6.6	2579	17	2674.2	6.8	2674.2	6.8	3.6
KNC01_48	178	1.536	2.829	0.024	0.2352	0.0022	0.77724	1362.9	6.5	1361	12	1361	7.9	1361	7.9	0.0
KNC01_49	75.4	0.4594	12.53	0.12	0.483	0.0056	0.68458	2645.6	9.6	2539	24	2733.1	9.7	2733.1	9.7	7.1
KNC01_51	473	1.335	2.246	0.031	0.1611	0.0017	0.45743	1196	10	963	9.7	1626	25	963	9.7	19.5
KNC01_51	156	1.019	2.791	0.048	0.1959	0.0044	0.80478	1353	13	1153	24	1680	17	1153	24	14.8
KNC01_52	167.2	2.099	3.039	0.041	0.2379	0.0029	0.74547	1416	10	1376	15	1472	10	1472	10	6.5
KNC01_53	192	1.011	3.107	0.035	0.2444	0.0026	0.82351	1433.9	8.6	1409	14	1465.7	7.1	1465.7	7.1	3.9

KNC01_54	114	2.17	1.842	0.023	0.1758	0.0022	0.49894	1060.1	8.2	1044	12	1082	12	1044	12	1.5
KNC01_55	101.6	1.247	12.68	0.13	0.4777	0.0049	0.74952	2655.1	9.8	2519	22	2757	11	2757	11	8.6
KNC01_56	32.7	0.663	1.747	0.032	0.1695	0.002	0.33092	1025	12	1009	11	1058	22	1009	11	1.6
KNC01_57	79.4	2.065	3.824	0.044	0.2781	0.0033	0.79545	1597.1	9.3	1582	16	1629	9.9	1629	9.9	2.9
KNC01_58	107.8	0.858	0.509	0.011	0.06443	0.00098	0.14737	417.3	7.1	402.5	5.9	491	41	402.5	5.9	3.5
KNC01_59	303.7	0.823	5.85	0.044	0.3388	0.0033	0.77356	1953.5	6.5	1881	16	2029.4	5.6	2029.4	5.6	7.3
KNC01_60	78.8	0.866	1.05	0.065	0.0681	0.0015	0.59211	721	30	424.4	8.9	1837	96	DISC	DISC	76.9
KNC01_61	31.12	0.6214	12.8	0.14	0.4888	0.0059	0.52341	2665	10	2565	26	2735.2	9.1	2735.2	9.1	6.2
KNC01_62	55.7	0.515	1.413	0.071	0.0904	0.0037	0.092976	897	31	558	22	1910	100	DISC	DISC	70.8
KNC01_62	28.8	0.577	1.48	0.061	0.1316	0.004	0.37118	920	25	797	23	1247	50	797	23	13.4
KNC01_63	214	1.507	2.456	0.049	0.1961	0.0034	0.89164	1257	14	1154	18	1433	14	1154	18	8.2
KNC01_64	171.3	1.844	0.5188	0.007	0.06795	0.00078	0.42513	424.2	4.6	423.8	4.7	420	19	423.8	4.7	0.1
KNC01_65	129.4	1.87	4.106	0.075	0.2956	0.0041	0.84756	1654	15	1669	20	1639	14	1639	14	1.8
KNC01_66	523	1.491	0.6008	0.0055	0.06924	0.00068	0.36127	477.7	3.5	431.5	4.1	707	14	431.5	4.1	9.7
KNC01_67	73.5	1.917	1.835	0.026	0.1746	0.003	0.54634	1058.3	9.6	1037	17	1126	21	1037	17	2.0
KNC01_68	134.3	1.035	0.7794	0.0082	0.0938	0.0011	0.41768	585	4.7	577.7	6.6	612	21	577.7	6.6	1.2
KNC01_69	23.98	0.3804	2.516	0.047	0.215	0.0032	0.35142	1275	14	1258	17	1329	18	1329	18	5.3
KNC01_70	317.4	1.429	1.698	0.013	0.1683	0.0017	0.63056	1007.4	4.9	1002.7	9.4	1022.9	9.5	1002.7	9.4	0.5
KNC01_71	111	2.37	4.029	0.053	0.2942	0.003	0.67972	1643	11	1662	15	1616.1	9.8	1616.1	9.8	2.8
KNC01_72	164.6	0.614	3.249	0.021	0.2566	0.0021	0.48406	1468.8	4.9	1472	11	1468	10	1468	10	0.3
KNC01_73	140.3	1.954	3.985	0.034	0.2869	0.0027	0.52485	1630.8	6.9	1626	14	1642.4	9.4	1642.4	9.4	1.0
KNC01_74	66.5	0.881	5.317	0.093	0.3325	0.0059	0.59994	1871	15	1850	29	1898	13	1898	13	2.5
KNC01_75	209.3	1.515	2.277	0.023	0.2051	0.0018	0.77579	1204.7	7.1	1202.5	9.8	1207.9	8.7	1207.9	8.7	0.4
KNC01_76	106.4	2.322	13.01	0.12	0.4949	0.0055	0.68059	2679.6	8.5	2594	24	2741.9	9.9	2741.9	9.9	5.4
KNC01_77	135.8	1.121	4.866	0.061	0.3173	0.0029	0.68855	1795	10	1776	14	1822	12	1822	12	2.5
KNC01_78	184.9	1.093	1.993	0.017	0.1871	0.0017	0.53683	1112.7	5.9	1105.3	9.1	1131.5	9.3	1105.3	9.1	0.7
KNC01_80	41.4	0.3525	1.488	0.026	0.149	0.0024	0.3502	926	10	895	14	1011	25	895	14	3.3
KNC01_81	61.5	1.82	0.992	0.017	0.1147	0.0011	0.15223	699	8.4	701.8	6.9	703	22	701.8	6.9	0.4
KNC01_82	53.32	0.723	9.86	0.23	0.4378	0.0082	0.81222	2419	22	2345	36	2490	13	2490	13	5.8
KNC01_83	90.5	1.154	1.793	0.02	0.1739	0.002	0.51158	1042.6	7.4	1033	11	1082	13	1033	11	0.9

KNC01_84	144.5	1.244	3.939	0.029	0.285	0.0023	0.46652	1621.4	6	1616	11	1625.2	7.9	1625.2	7.9	0.6
KNC01_85	97.3	0.865	0.5405	0.0091	0.0697	0.00093	0.29696	438.4	6	434.3	5.6	469	20	434.3	5.6	0.9
KNC01_86	138.6	1.479	3.146	0.029	0.2504	0.0023	0.72664	1444.6	7	1440	12	1450.5	7.8	1450.5	7.8	0.7
KNC01_87	157.5	3.012	1.664	0.019	0.1647	0.0021	0.65094	994.4	7.3	983	12	1027	11	983	12	1.1
KNC01_88	136.7	1.018	0.433	0.02	0.05377	0.0008	0.67983	363	13	337.6	4.9	509	58	337.6	4.9	7.0
KNC01_89	119.1	1.513	3.408	0.063	0.2478	0.0053	0.89345	1509	16	1426	28	1637	16	1637	16	12.9
KNC01_89	79.7	1.485	3.87	0.14	0.2731	0.0045	0.44723	1604	27	1556	23	1674	46	1674	46	7.0
KNC01_90	63.6	0.603	5.585	0.085	0.3388	0.0043	0.6293	1915	13	1881	20	1939	15	1939	15	3.0
KNC01_91	199.6	2.324	3.829	0.034	0.2752	0.0036	0.66919	1598.3	7.1	1567	18	1651.2	9.5	1651.2	9.5	5.1
KNC01_92	89.6	1.038	3.253	0.025	0.2543	0.0023	0.36306	1470.4	5.9	1460	12	1490	13	1490	13	2.0
KNC01_93	66.8	0.754	3.577	0.049	0.2767	0.0033	0.70383	1543	11	1575	17	1504	11	1504	11	4.7
KNC01_94	17	0.734	1.725	0.044	0.1661	0.0037	0.48934	1022	18	993	21	1130	31	993	21	2.8
KNC01_95	697	9.04	1.732	0.013	0.168	0.0017	0.90707	1021.1	5	1001	9.2	1068.4	9.5	1001	9.2	2.0
KNC01_96	228	3.095	1.862	0.024	0.147	0.0016	0.77856	1067.1	8.7	883.8	9	1466.8	9.5	883.8	9	17.2
KNC01_97	173.7	1.679	3.673	0.039	0.2547	0.0025	0.6731	1565.1	8.4	1463	13	1717	8.9	1717	8.9	14.8
KNC01_98	62	1.193	2.05	0.025	0.1902	0.0021	0.35034	1132.8	8.3	1122	11	1137	14	1122	11	1.0
KNC01_99	207	1.18	0.5501	0.0074	0.07175	0.00067	0.32158	444.9	4.9	446.7	4	440	19	446.7	4	0.4
KNC01_100	27.27	0.5023	1.573	0.036	0.1573	0.0025	0.21685	960	14	942	14	999	25	942	14	1.9
KNC01_101	54.6	1.707	1.903	0.03	0.182	0.0023	0.50742	1081	10	1077	13	1099	16	1077	13	0.4
KNC01_102	201	2.38	1.828	0.019	0.1803	0.0016	0.57884	1055	6.8	1069.7	9.1	1020	11	1069.7	9.1	1.4
KNC01_103	573	2.212	4.591	0.042	0.302	0.003	0.74419	1747.1	7.6	1701	15	1797.7	7.9	1797.7	7.9	5.4
KNC01_104	66.1	0.645	1.743	0.024	0.172	0.002	0.40536	1023.9	8.9	1023	11	1022	17	1023	11	0.1
KNC01_106	37.3	0.854	1.442	0.024	0.1452	0.0025	0.30642	907.7	9.5	874	14	980	24	874	14	3.7
KNC01_107	65	0.917	1.964	0.021	0.1885	0.0021	0.41258	1102.9	7.3	1113	11	1077	15	1113	11	0.9
KNC01_108	91.6	0.79	0.567	0.028	0.0692	0.0012	0.57331	454	16	431	7.1	559	65	431	7.1	5.1
KNC01_109	65.4	1.695	1.722	0.022	0.1713	0.0019	0.41992	1017.4	7.9	1019	11	1027	15	1019	11	0.2
KNC01_110	274.6	1.343	3.447	0.053	0.2587	0.0032	0.85036	1514	12	1483	17	1558	12	1558	12	4.8
KNC01_111	151	2.117	1.805	0.018	0.1774	0.0017	0.43636	1047.8	6.4	1052.9	9.5	1033	12	1052.9	9.5	0.5
KNC01_112	362	0.6939	3.971	0.029	0.2862	0.0026	0.65898	1629.6	5.9	1622	13	1628	10	1628	10	0.4
KNC01_113	233	1.254	10.11	0.077	0.4494	0.0036	0.64826	2444.4	7	2392	16	2488.6	6.5	2488.6	6.5	3.9

KNC01_114	81.8	0.724	2.51	0.031	0.2124	0.0023	0.1082	1275.3	9.2	1241	12	1329	14	1329	14	6.6
KNC01_115	172.9	1.729	2.994	0.031	0.237	0.0029	0.73368	1405.8	7.8	1371	15	1461	12	1461	12	6.2
KNC01_116	8.49	1.233	1.867	0.07	0.1583	0.0044	0.34807	1065	25	950	24	1271	40	950	24	10.8
KNC01_117	43.1	0.994	1.795	0.021	0.1728	0.0019	0.43249	1043.1	7.5	1027	11	1074	13	1027	11	1.5
KNC01_118	113	1.102	3.896	0.037	0.2822	0.003	0.51107	1613.3	7.9	1602	15	1630	11	1630	11	1.7
KNC01_119	218	3.77	0.642	0.0067	0.08162	0.00084	0.4109	504	4.1	505.8	5	500	15	505.8	5	0.4
KNC01_120	56.3	1.545	3.036	0.035	0.2418	0.0022	0.44942	1416.1	8.9	1398	12	1437	11	1437	11	2.7
KNC01_121	146	1.451	2.153	0.021	0.1971	0.0016	0.42264	1166.6	6.6	1159.6	8.7	1167.9	8.8	1159.6	8.7	0.6
KNC2_1	66.2	0.63	1.872	0.024	0.183	0.0019	0.24459	1070.7	8.6	1085	10	1045	18	1085	10	1.3
KNC2_2	52.4	1.194	3.913	0.051	0.2744	0.0042	0.49713	1616	10	1562	21	1697	19	1697	19	8.0
KNC2_4	25.1	0.4081	4.09	0.072	0.2928	0.0044	0.88428	1651	14	1655	22	1637	18	1637	18	1.1
KNC2_5	79.2	2.118	4.297	0.052	0.3022	0.0031	0.66692	1691.8	9.9	1702	16	1685	11	1685	11	1.0
KNC2_6	248	1.165	2.876	0.063	0.2301	0.0041	0.87843	1378	17	1334	21	1434	13	1434	13	7.0
KNC2_7	9.5	1.307	2.415	0.08	0.2148	0.0043	0.38089	1246	24	1254	23	1218	31	1218	31	3.0
KNC2_8	5.13	3.04	13.8	0.36	0.528	0.015	0.5343	2736	24	2730	65	2748	19	2748	19	0.7
KNC2_9	130.4	0.932	1.498	0.017	0.1516	0.0014	0.51596	928.9	7.1	909.9	7.7	975	15	909.9	7.7	2.0
KNC2_10	54.3	0.654	12.74	0.12	0.5305	0.0062	0.62948	2660.1	8.6	2747	26	2593	10	2593	10	5.9
KNC2_11	138	0.789	4	0.045	0.2873	0.0032	0.56679	1633.7	9.1	1628	16	1639	10	1639	10	0.7
KNC2_12	59.7	1.109	4.042	0.052	0.2984	0.0031	0.5638	1643	10	1683	16	1581	13	1581	13	6.5
KNC2_13	234	0.813	5.259	0.04	0.3492	0.0035	0.89811	1859.6	7.8	1930	17	1787.7	8.5	1787.7	8.5	8.0
KNC2_14	62.9	1.15	2.292	0.027	0.2052	0.0027	0.35251	1210.5	8.1	1205	15	1230	15	1230	15	2.0
KNC2_15	89.9	2.078	4.205	0.043	0.3037	0.003	0.59935	1674.3	8.4	1709	15	1631.4	9.8	1631.4	9.8	4.8
KNC2_16	57.1	0.8018	3.507	0.05	0.2707	0.0036	0.53457	1528	11	1544	18	1510	16	1510	16	2.3
KNC2_17	88.5	1.888	1.963	0.025	0.1896	0.0025	0.57758	1103.5	8.9	1119	14	1069	19	1119	14	1.4
KNC2_18	351	3.024	4.354	0.057	0.2942	0.0049	0.74987	1703	11	1662	24	1744	12	1744	12	4.7
KNC2_19	58.7	1.727	0.474	0.014	0.061	0.0013	0.39639	394.2	9.1	381.5	7.7	483	33	381.5	7.7	3.2
KNC2_20	151.8	1.547	2.093	0.02	0.1955	0.0024	0.49234	1146.1	6.7	1151	13	1129	11	1151	13	0.4
KNC2_21	92.1	0.614	14.19	0.15	0.5448	0.0074	0.77653	2763	10	2806	30	2731	8.4	2731	8.4	2.7

KNC2_22	39.06	0.757	2.025	0.03	0.1959	0.0029	0.7646	1123	10	1153	16	1072	14	1153	16	2.7
KNC2_23	178	1.352	3.519	0.031	0.272	0.0028	0.54161	1532	7	1551	14	1511.8	9.5	1511.8	9.5	2.6
KNC2_24	70.9	0.816	13.67	0.17	0.5382	0.0065	0.7643	2731	12	2775	27	2697.3	9.4	2697.3	9.4	2.9
KNC2_25	43.1	0.692	4.548	0.083	0.314	0.0069	0.69254	1738	15	1759	34	1710	20	1710	20	2.9
KNC2_26	124.1	1.824	1.982	0.028	0.1881	0.0024	0.59974	1110.4	9.2	1113	13	1096	17	1113	13	0.2
KNC2_27	213.1	2.065	4.1	0.05	0.2934	0.0037	0.74114	1654.7	9.7	1658	19	1650.8	7.3	1650.8	7.3	0.4
KNC2_28	272	2.539	1.578	0.012	0.1595	0.0017	0.42884	962	4.7	955.2	9.7	1003	14	955.2	9.7	0.7
KNC2_29	83.1	1.039	4.065	0.053	0.2951	0.0042	0.56562	1646	11	1667	21	1640	15	1640	15	1.6
KNC2_30	96	1.279	4.032	0.041	0.2886	0.0029	0.75771	1640.1	8.2	1634	14	1638	7.5	1638	7.5	0.2
KNC2_31	48.3	0.739	2.742	0.046	0.2231	0.0031	0.70847	1338	12	1298	16	1411	20	1411	20	8.0
KNC2_32	122.8	1.848	1.807	0.017	0.1777	0.0017	0.4321	1048.5	6.2	1054.3	9.1	1030	11	1054.3	9.1	0.6
KNC2_33	12.78	0.611	4.147	0.083	0.2958	0.0045	0.31929	1666	17	1670	22	1673	23	1673	23	0.2
KNC2_34	150.3	1.052	2.797	0.028	0.2373	0.0027	0.69916	1354.2	7.5	1372	14	1319	11	1319	11	4.0
KNC2_35	21.91	1.169	4.238	0.077	0.2851	0.0061	0.48175	1679	15	1616	30	1762	22	1762	22	8.3
KNC2_36	218.4	12.2	0.589	0.012	0.0734	0.0011	0.80832	469.8	7.6	456.8	6.7	544	31	456.8	6.7	2.8
KNC2_37	20.59	1.701	4.194	0.066	0.3058	0.0037	0.14	1671	13	1719	18	1608	18	1608	18	6.9
KNC2_38	18.75	0.506	5.19	0.26	0.1468	0.0048	0.55515	1838	46	882	27	3233	45	DISC	DISC	72.7
KNC2_39	43.7	1.051	0.55	0.016	0.073	0.0012	0.17682	444	11	454.4	7.3	400	40	454.4	7.3	2.3
KNC2_40	178.1	1.42	4.189	0.035	0.2972	0.0033	0.62511	1672.3	7.1	1677	16	1661	9.8	1661	9.8	1.0
KNC2_41	46.4	1.788	5.029	0.062	0.3298	0.0051	0.64326	1825	11	1836	25	1824	12	1824	12	0.7
KNC2_42	260	4.041	4.854	0.071	0.3319	0.0047	0.74539	1794	12	1847	23	1749	13	1749	13	5.6
KNC2_43	255.5	1.338	3.053	0.031	0.2408	0.0031	0.91758	1418.8	8.3	1390	16	1463.6	6.6	1463.6	6.6	5.0
KNC2_44	79.5	1.23	3.99	0.036	0.288	0.0028	0.4091	1631.6	7.4	1631	14	1646	12	1646	12	0.9
KNC2_45	177.2	1.347	4.724	0.04	0.3237	0.0033	0.69077	1772.9	7.1	1810	15	1738	8.4	1738	8.4	4.1
KNC2_46	166.9	1.296	1.835	0.023	0.1787	0.0025	0.74721	1057.6	8.3	1060	13	1061	10	1060	13	0.2
KNC2_47	101.4	1.802	2.439	0.045	0.2146	0.0027	0.70495	1252	13	1253	14	1247	19	1247	19	0.5
KNC2_48	46.6	1.543	2.95	0.042	0.2454	0.0032	0.73799	1394	11	1414	17	1368	16	1368	16	3.4
KNC2_49	42.1	1.761	2.184	0.033	0.2072	0.0028	0.35128	1176	10	1213	15	1140	18	1140	15	3.1
KNC2_50	63.5	1.454	2.726	0.044	0.2298	0.0035	0.60888	1334	12	1333	18	1355	16	1355	16	1.6
KNC2_51	37.2	2.88	2.161	0.039	0.1967	0.0026	0.31697	1170	13	1157	14	1172	24	1157	14	1.1

KNC2_52	318	2.271	5.15	0.042	0.3265	0.0037	0.62359	1844.2	6.9	1821	18	1871	12	1871	12	2.7
KNC2_53	26.3	1.106	2.633	0.063	0.2254	0.0045	0.65271	1310	18	1310	24	1324	22	1324	22	1.1
KNC2_54	19.4	0.5208	1.82	0.045	0.1827	0.0032	0.16613	1051	16	1081	17	1020	40	1081	17	2.9
KNC2_55	153	1.231	4.094	0.042	0.3013	0.0037	0.39558	1653.8	8.6	1698	18	1603	14	1603	14	5.9
KNC2_56	99.7	1.661	3.446	0.04	0.2732	0.0033	0.66117	1514.2	9.1	1557	17	1458	13	1458	13	6.8
KNC2_57	29.6	0.555	2.49	0.053	0.2211	0.0039	0.76367	1267	16	1287	21	1228	22	1228	22	4.8
KNC2_58	105.3	2.233	2.129	0.024	0.1963	0.0019	0.43231	1157.8	7.9	1155	10	1172	12	1155	10	0.2
KNC2_59	48.3	2.032	14.46	0.14	0.527	0.0062	0.49588	2779.7	9.2	2728	26	2812	10	2812	10	3.0
KNC2_60	72.2	2.011	1.916	0.028	0.1842	0.0022	0.46131	1086	9.8	1090	12	1087	19	1090	12	0.4
KNC2_61	72	1.26	2.292	0.031	0.2112	0.0023	0.48666	1209	9.6	1235	12	1162	17	1162	12	2.2
KNC2_62	7.72	1.232	2.107	0.091	0.1965	0.0059	0.50231	1150	30	1155	32	1162	51	1155	32	0.4
KNC2_63	137.7	0.805	3.857	0.045	0.2827	0.0043	0.85684	1604.2	9.5	1604	22	1602	12	1602	12	0.1
KNC2_64	161.2	2.454	3.579	0.045	0.2648	0.003	0.6989	1544.2	9.9	1514	15	1591	12	1591	12	4.8
KNC2_65	33.8	0.96	4.832	0.059	0.3216	0.004	0.37827	1790	10	1797	20	1801	16	1801	16	0.2
KNC2_66	38.2	0.825	14.33	0.14	0.5515	0.0061	0.65682	2771.3	9.2	2830	25	2731.4	8.8	2731.4	8.8	3.6
KNC2_67	68.5	0.923	1.857	0.062	0.1822	0.0049	0.70736	1071	23	1078	27	1078	37	1078	27	0.7
KNC2_68	74.9	1.63	5.054	0.098	0.3021	0.0046	0.69323	1826	17	1701	23	1978	23	1978	23	14.0
KNC2_70	47.8	1.287	17.1	0.17	0.6006	0.0061	0.71883	2939.7	9.3	3031	24	2877	8.4	2877	8.4	5.4
KNC2_71	43.6	1.809	2.521	0.042	0.217	0.0026	0.86901	1277	12	1266	14	1310	16	1310	16	3.4
KNC2_72	182.2	1.706	5.826	0.059	0.359	0.0041	0.85465	1950.9	9.2	1977	19	1921.2	9.3	1921.2	9.3	2.9
KNC2_73	91.8	1.537	1.801	0.022	0.1773	0.0017	0.27539	1045.1	7.9	1052.1	9.4	1029	16	1052.1	9.4	0.7
KNC2_74	76.2	0.662	4.185	0.059	0.2994	0.004	0.87726	1670	12	1688	20	1650	12	1650	12	2.3
KNC2_75	287	19.6	0.593	0.024	0.0749	0.0021	0.85714	472	15	466	12	532	55	466	12	1.3
KNC2_76	158	0.857	4.029	0.047	0.2889	0.0036	0.62324	1639.2	9.6	1635	18	1652	15	1652	15	1.0
KNC2_77	37.3	0.903	1.941	0.041	0.1892	0.0029	0.45975	1094	14	1116	16	1069	22	1116	16	2.0
KNC2_78	77.5	0.954	1.924	0.021	0.1868	0.0016	0.25083	1090	7.5	1103.9	8.9	1069	13	1103.9	8.9	1.3
KNC2_79	77.2	1.647	4.264	0.041	0.3085	0.0028	0.57365	1687	7.8	1733	14	1631.4	8.1	1631.4	8.1	6.2
KNC2_80	43	0.807	2.563	0.048	0.2293	0.0029	0.52748	1289	14	1331	15	1230	18	1230	18	8.2
KNC2_81	58.8	0.393	13.68	0.28	0.534	0.011	0.8805	2727	19	2758	48	2711	15	2711	15	1.7
KNC2_81	106.2	0.815	32.36	0.51	0.7468	0.0069	0.76422	3563	15	3595	25	3553	11	3553	11	1.2

KNC2_82	37.6	1.074	2.703	0.045	0.2302	0.0031	0.65905	1328	12	1338	17	1342	16	1342	16	0.3
KNC2_83	44.3	1.303	1.954	0.032	0.1902	0.0026	0.23744	1099	11	1122	14	1064	21	1122	14	2.1
KNC2_84	40.1	0.428	2.048	0.047	0.2008	0.0036	0.63907	1131	16	1179	19	1051	19	1179	19	4.2
KNC2_86	292	1.76	4.238	0.047	0.3039	0.0031	0.86828	1682.2	9.6	1710	16	1653	11	1653	11	3.4
KNC2_87	161	1.289	2.452	0.035	0.2183	0.0028	0.90267	1257	10	1273	15	1231	12	1231	12	3.4
KNC2_88	140	2.02	2.201	0.027	0.2033	0.0029	0.67132	1180.8	8.7	1193	16	1147	12	1193	16	1.0
KNC2_89	60.9	1.181	10.45	0.15	0.4364	0.005	0.85184	2474	14	2334	23	2595	11	2595	11	10.1
KNC2_91	95.9	0.813	3.572	0.041	0.2771	0.0034	0.88944	1542.5	9.2	1576	17	1498.3	8.5	1498.3	8.5	5.2
KNC2_92	403	1.66	3.41	0.093	0.2449	0.0052	0.91229	1505	22	1412	27	1616	16	1616	16	12.6
KNC2_92	105	1.296	4.689	0.078	0.3311	0.005	0.8486	1764	14	1843	24	1670	11	1670	11	10.4
KNC2_93	51.7	1.036	1.874	0.032	0.1806	0.0023	0.29727	1071	11	1070	12	1077	24	1070	12	0.1
KNC2_94	73.9	0.6886	1.657	0.024	0.1709	0.0025	0.73481	994.2	9.6	1017	14	948	15	1017	14	2.3
KNC2_95	198	2.337	4.357	0.027	0.314	0.0026	0.72544	1703.9	5	1760	13	1639.5	7.6	1639.5	7.6	7.3
KNC2_96	97.6	0.4472	4.354	0.044	0.3103	0.0035	0.45666	1704.1	8.5	1742	17	1659	13	1659	13	5.0
KNC2_97	55.8	1.394	14.41	0.12	0.5664	0.0043	0.55769	2776.2	7.8	2893	18	2701.9	8.5	2701.9	8.5	7.1
KNC2_98	83.3	2.024	3.03	0.043	0.2526	0.0033	0.67186	1416	11	1451	17	1360	13	1360	13	6.7
KNC2_99	87.1	0.947	0.54	0.012	0.0718	0.0011	0.2216	438	7.8	446.7	6.5	404	27	446.7	6.5	2.0
KNC2_100	202	2.11	5.715	0.052	0.3597	0.0044	0.67615	1933	7.8	1983	21	1897.9	8.7	1897.9	8.7	4.5
KNC2_101	111	0.816	3.972	0.046	0.2779	0.0031	0.57277	1630	9.4	1580	16	1692	13	1692	13	6.6
KNC2_102	90.3	1.59	0.583	0.011	0.07482	0.00092	0.1385	465.7	7	465.1	5.5	499	25	465.1	5.5	0.1
KNC2_103	114	0.711	3.933	0.052	0.2803	0.0044	0.80824	1619	11	1595	22	1652	11	1652	11	3.5
KNC2_104	206	0.877	4.03	0.047	0.2902	0.0035	0.77668	1642	9.5	1642	18	1636.4	9.8	1636.4	9.8	0.3
KNC2_105	64.3	0.784	1.593	0.022	0.1633	0.002	0.37084	966.9	8.7	975	11	942	17	975	11	0.8
KNC2_106	68	0.884	3.467	0.078	0.259	0.005	0.80184	1518	18	1484	26	1554	15	1554	15	4.5
KNC2_107	58.8	1.12	15.93	0.13	0.5762	0.0061	0.66162	2872.2	7.6	2935	25	2828.6	8.4	2828.6	8.4	3.8
KNC2_108	131.9	1.685	3.477	0.034	0.2696	0.0026	0.74443	1521.5	7.8	1539	13	1506	9.1	1506	9.1	2.2
KNC2_109	228.4	3.796	3.534	0.034	0.2738	0.003	0.55322	1535.3	7.7	1560	15	1488	13	1488	13	4.8
KNC2_110	193.7	2.12	1.659	0.041	0.1589	0.0042	0.86937	993	15	950	23	1099	15	950	23	4.3
KNC2_111	139.4	1.522	1.779	0.017	0.1757	0.0019	0.59425	1037.7	6	1043	11	1032	12	1043	11	0.5
KNC2_112	510	3.82	1.301	0.053	0.1302	0.004	0.87632	845	23	789	23	992	27	789	23	6.6

KNC2_112	182	1.52	2.033	0.026	0.1909	0.0025	0.68493	1126.3	8.7	1126	14	1121	12	1126	14	0.0
KNC2_113	348	0.904	0.879	0.028	0.0833	0.003	0.38826	640	15	516	18	1104	59	516	18	19.4
KNC2_113	103.5	1.094	1.469	0.035	0.1386	0.0032	0.70162	916	14	836	18	1102	20	836	18	8.7
KNC2_114	208.8	1.068	2.082	0.021	0.197	0.0018	0.52081	1142.4	6.8	1159	9.8	1109	12	1159	9.8	1.5
KNC2_115	23.7	0.569	1.879	0.047	0.1805	0.0033	0.31695	1072	17	1069	18	1086	31	1069	18	0.3
KNC2_116	127	1.419	3.422	0.029	0.2663	0.0022	0.53663	1509.1	6.6	1522	11	1498	7.9	1498	7.9	1.6
KNC2_117	176.7	0.635	1.89	0.034	0.1811	0.0041	0.75153	1077	12	1072	23	1094	18	1072	23	0.5
KNC2_118	326	1.398	3.036	0.021	0.2488	0.0021	0.52284	1416.6	5.3	1432	11	1396.6	9.6	1396.6	9.6	2.5
KNC2_119	110	1.043	1.802	0.021	0.1779	0.0021	0.42337	1046.8	7.6	1055	11	1042	14	1055	11	0.8
KNC2_120	223.3	1.417	2.788	0.024	0.2338	0.002	0.43608	1352.6	6.2	1354	11	1347.2	9.4	1347.2	9.4	0.5
KNC2_121	65.2	1.275	2.856	0.037	0.2382	0.0033	0.55104	1370.9	9.5	1377	17	1346	15	1346	15	2.3
KNC3_1	134.4	1.83	0.5488	0.0082	0.07194	0.00082	0.089977	444	5.3	447.8	4.9	431	23	447.8	4.9	0.9
KNC3_4	216.2	42.2	3.851	0.04	0.291	0.0033	0.66995	1604.2	8.2	1646	16	1542	10	1542	10	6.7
KNC3_2	267	3.31	5.678	0.061	0.3397	0.004	0.84541	1927.3	9.2	1885	19	1972	6.1	1972	6.1	4.4
KNC3_3	75.4	0.906	4.375	0.042	0.3058	0.0024	0.59664	1707.1	7.9	1720	12	1693.3	9.6	1693.3	9.6	1.6
KNC3_5	127.3	1.016	3.797	0.064	0.2748	0.004	0.6235	1593	13	1565	20	1633	16	1633	16	4.2
KNC3_6	64.4	1.472	3.824	0.063	0.2734	0.0036	0.47551	1600	12	1561	19	1664	13	1664	13	6.2
KNC3_7	240.7	1.62	4.92	0.038	0.3218	0.0023	0.69175	1805.2	6.6	1798	11	1809.3	5.5	1809.3	5.5	0.6
KNC3_8	204.6	1.175	3.297	0.025	0.2555	0.0024	0.50357	1480.2	5.9	1467	12	1491.6	9.4	1491.6	9.4	1.6
KNC3_9	58.7	0.986	3.927	0.054	0.28	0.0045	0.67576	1620	12	1591	23	1647	14	1647	14	3.4
KNC3_10	140	1.119	4.188	0.045	0.2975	0.0034	0.60386	1671	8.9	1678	17	1652	11	1652	11	1.6
KNC3_11	35.99	1.218	3.46	0.088	0.2463	0.0048	0.72535	1516	20	1419	25	1637	22	1637	22	13.3
KNC3_12	217.7	1.662	3.258	0.028	0.2571	0.0021	0.53653	1470.6	6.8	1475	11	1457.3	9	1457.3	9	1.2
KNC3_13	68	0.756	3.533	0.049	0.2696	0.0034	0.78866	1534	11	1538	17	1529	14	1529	14	0.6
KNC3_14	97.1	1.138	3.327	0.038	0.2615	0.0036	0.71827	1486.7	9	1500	18	1469	8.4	1469	8.4	2.1
KNC3_15	239.1	0.762	0.5379	0.0064	0.0667	0.001	0.24493	436.9	4.2	416.2	6	546	22	416.2	6	4.7
KNC3_16	208	2.289	2.76	0.058	0.2205	0.0045	0.81598	1344	15	1284	24	1432	15	1432	15	10.3
KNC3_17	55.3	0.981	4.341	0.053	0.3062	0.0031	0.33992	1701	10	1722	16	1669	15	1669	15	3.2

KNC3_18	160	1.203	2.337	0.033	0.1814	0.0024	0.66001	1225.3	9.5	1074	13	1482	14	1074	13	12.3
KNC3_19	149.1	1.186	15.12	0.14	0.5446	0.0064	0.76138	2822.4	8.8	2802	27	2829.1	9.8	2829.1	9.8	1.0
KNC3_20	40.3	0.885	4.022	0.057	0.2816	0.0045	0.59875	1641	11	1599	23	1672	14	1672	14	4.4
KNC3_21	191.2	2.12	5.524	0.051	0.3355	0.0026	0.67246	1905	7.7	1865	13	1948	6.6	1948	6.6	4.3
KNC3_22	273	3.07	4.278	0.031	0.3038	0.0023	0.5642	1688.9	5.9	1711	11	1648.9	7.5	1648.9	7.5	3.8
KNC3_23	234.7	2.027	4.197	0.037	0.2939	0.0032	0.71326	1673	7.2	1660	16	1685.9	7.5	1685.9	7.5	1.5
KNC3_24	92.9	0.945	0.574	0.01	0.0722	0.0011	0.025759	460	6.7	449.6	6.7	532	35	449.6	6.7	2.3
KNC3_25	37.4	0.972	1.899	0.039	0.1762	0.0024	0.12597	1079	14	1046	13	1127	26	1046	13	3.1
KNC3_26	177.5	0.401	5.83	0.13	0.3234	0.0064	0.18779	1951	19	1806	31	2179	75	2179	75	17.1
KNC3_26	126.2	0.3777	6.566	0.058	0.3745	0.0029	0.6346	2054.4	7.8	2050	14	2051.2	6	2051.2	6	0.1
KNC3_27	107.7	1.013	5.412	0.042	0.3425	0.0027	0.41254	1886.4	6.6	1898	13	1860	11	1860	11	2.0
KNC3_28	13.64	0.4896	2.13	0.068	0.1913	0.0042	0.39121	1156	22	1128	23	1206	39	1128	23	2.4
KNC3_29	176	1.182	12.08	0.25	0.494	0.0069	0.79878	2608	19	2587	30	2632	14	2632	14	1.7
KNC3_30	78.7	1.43	4.63	0.039	0.3108	0.0022	0.16487	1755.2	7	1745	11	1755	11	1755	11	0.6
KNC3_31	60.8	1.595	1.258	0.026	0.1305	0.0027	0.037943	826	12	790	15	947	35	790	15	4.4
KNC3_32	43.3	0.94	3.917	0.057	0.2835	0.0039	0.56353	1616	12	1609	20	1651	17	1651	17	2.5
KNC3_33	126.9	0.843	3.991	0.04	0.2838	0.0027	0.68534	1631.7	8.2	1610	13	1654.1	8.8	1654.1	8.8	2.7
KNC3_34	157	1.574	4.356	0.032	0.3086	0.0023	0.5687	1704.5	6	1734	11	1663.4	6.6	1663.4	6.6	4.2
KNC3_35	214	1.443	3.281	0.043	0.2564	0.003	0.63512	1476	10	1471	15	1480	11	1480	11	0.6
KNC3_36	339	2.54	3.394	0.023	0.2666	0.0017	0.61557	1502.8	5.3	1523.4	8.7	1473.1	6.7	1473.1	6.7	3.4
KNC3_37	74.8	1.346	4.372	0.036	0.3129	0.0027	0.2974	1706.7	6.9	1755	13	1642	11	1642	11	6.9
KNC3_38	57.2	0.7212	1.875	0.028	0.1807	0.0025	0.53311	1074.2	9.9	1071	14	1072	20	1071	14	0.3
KNC3_39	28.6	0.751	2.438	0.041	0.2166	0.0027	0.032924	1253	12	1264	14	1209	25	1209	25	4.5
KNC3_40	186.4	0.8121	6.006	0.081	0.3707	0.0044	0.59596	1976	12	2033	20	1907	16	1907	16	6.6
KNC3_41	174.3	1.015	3.271	0.027	0.255	0.0024	0.75376	1473.9	6.5	1464	12	1477.2	9.3	1477.2	9.3	0.9
KNC3_42	148	1.64	4.297	0.045	0.3069	0.0027	0.55938	1692.1	8.7	1725	13	1650.2	8.4	1650.2	8.4	4.5
KNC3_43	42.4	0.725	5.514	0.078	0.3507	0.0054	0.57475	1901	12	1940	25	1867	15	1867	15	3.9
KNC3_44	151.4	1.126	1.86	0.035	0.1793	0.0031	0.94017	1066	13	1063	17	1066	12	1063	17	0.3
KNC3_45	343	0.757	4.254	0.031	0.3024	0.0033	0.34218	1684.3	6	1703	16	1661	13	1661	13	2.5
KNC3_46	204	2.591	4.793	0.028	0.3226	0.0023	0.69453	1784.1	5.1	1802	11	1761.4	5.5	1761.4	5.5	2.3

KNC3_47	140.5	1.307	5.121	0.043	0.3347	0.0029	0.65799	1839.2	7.1	1861	14	1803	7.8	1803	7.8	3.2
KNC3_49	57.8	1.084	4.08	0.047	0.2943	0.0035	0.31897	1651.3	9.7	1663	17	1630	10	1630	10	2.0
KNC3_50	91.5	2.206	2.026	0.031	0.1893	0.0027	0.62601	1125	10	1121	16	1147	17	1121	16	0.4
KNC3_51	201	1.76	4.722	0.03	0.3166	0.0026	0.48903	1771.7	5.2	1773	13	1770.1	7.8	1770.1	7.8	0.2
KNC3_52	160.2	2.228	2.011	0.024	0.191	0.0021	0.62859	1118.6	8.2	1127	11	1100	13	1127	11	0.8
KNC3_53	65	0.782	4.039	0.058	0.2849	0.0035	0.09345	1642	11	1616	18	1681	15	1681	15	3.9
KNC3_54	169.4	1.92	4.854	0.037	0.3282	0.0029	0.46071	1793.9	6.5	1829	14	1749	12	1749	12	4.6
KNC3_55	61.99	0.716	3.243	0.065	0.23	0.0022	0.3565	1465	15	1334	11	1677	29	1677	29	20.5
KNC3_56	39.31	0.71	1.998	0.042	0.1902	0.0024	0.14779	1113	14	1122	13	1102	32	1122	13	0.8
KNC3_57	103	1.139	19.09	0.12	0.6289	0.0054	0.61845	3046	5.9	3145	21	2975.8	6.4	2975.8	6.4	5.7
KNC3_58	76.2	0.73	4.806	0.048	0.3256	0.0028	0.65804	1785.5	8.4	1817	14	1747	12	1747	12	4.0
KNC3_59	50.23	25.4	5.47	0.2	0.342	0.0083	0.58228	1894	31	1896	40	1949	51	1949	51	2.7
KNC3_59	32.6	2.16	11.49	0.16	0.512	0.008	0.70728	2563	13	2664	34	2482.4	9	2482.4	9	7.3
KNC3_60	238	1.681	4.589	0.043	0.3144	0.0028	0.76895	1746.9	7.8	1764	13	1739	7.8	1739	7.8	1.4
KNC3_61	30.5	0.351	5.244	0.079	0.3337	0.0052	0.50586	1860	13	1855	25	1878	16	1878	16	1.2
KNC3_62	767	2.57	1.788	0.025	0.1694	0.0018	0.95836	1040.3	9.4	1009	10	1110	14	1009	10	3.0
KNC3_63	121.3	0.707	0.573	0.012	0.07216	0.00084	0.28398	459.4	7.9	449.1	5	511	40	449.1	5	2.2
KNC3_64	87.1	2.283	20.02	0.31	0.6407	0.0097	0.77413	3092	15	3191	38	3028	11	3028	11	5.4
KNC3_65	74.43	0.928	2.019	0.024	0.1898	0.0018	0.43546	1121.5	7.9	1120	9.8	1130	16	1120	9.8	0.1
KNC3_66	240	0.939	5.524	0.035	0.3477	0.0023	0.44484	1904.1	5.5	1923	11	1891.3	7.7	1891.3	7.7	1.7
KNC3_67	89.3	2.115	2.236	0.029	0.2065	0.0019	0.31506	1191.6	9.1	1210	10	1172	15	1172	10	1.5
KNC3_68	162.4	8.94	13.11	0.11	0.5172	0.0056	0.6996	2687.1	7.6	2687	24	2689.1	8.7	2689.1	8.7	0.1
KNC3_69	385	1.756	2.682	0.046	0.2116	0.0038	0.91716	1322	12	1237	20	1464.2	7.6	1464.2	7.6	15.5
KNC3_70	157.6	2.47	4.849	0.036	0.3288	0.0028	0.63557	1793.2	6.3	1833	13	1752.7	7.5	1752.7	7.5	4.6
KNC3_71	64.4	0.757	1.754	0.03	0.1727	0.002	0.14543	1029	11	1027	11	1050	22	1027	11	0.2
KNC3_72	94.5	1.84	4.14	0.08	0.2953	0.0046	0.81514	1661	16	1668	23	1654	14	1654	14	0.8
KNC3_73	88.7	0.804	4.336	0.04	0.3059	0.0029	0.64333	1699.7	7.7	1720	14	1677	10	1677	10	2.6
KNC3_74	439	0.947	2.247	0.014	0.1913	0.0014	0.48233	1195.6	4.5	1129.1	7.6	1318.6	7.8	1129.1	7.6	5.6
KNC3_75	29.5	1.07	1.959	0.037	0.184	0.0023	0.061076	1100	13	1090	12	1118	25	1090	12	0.9
KNC3_76	101.2	2.48	1.93	0.034	0.1828	0.0023	0.58205	1091	12	1082	12	1115	17	1082	12	0.8

KNC3_77	209.4	1.215	2.233	0.021	0.204	0.0019	0.35651	1191.8	6.3	1197	10	1180	11	1197	10	0.4
KNC3_78	62.7	2.579	2.093	0.032	0.1948	0.002	0.16053	1146	11	1147	11	1152	26	1147	11	0.1
KNC3_79	69.6	1.754	4.88	0.044	0.3254	0.0027	0.49425	1798.3	7.6	1818	14	1775	11	1775	11	2.4
KNC3_80	64.74	1.852	3.554	0.038	0.2708	0.0037	0.50609	1538.6	8.5	1544	19	1535	13	1535	13	0.6
KNC3_81	58.4	0.3088	15.34	0.1	0.5661	0.0044	0.50337	2836.1	6.4	2891	18	2806.9	7.7	2806.9	7.7	3.0
KNC3_82	68.5	0.799	2.114	0.029	0.2032	0.0024	0.36346	1152.5	9.5	1192	13	1091	15	1192	13	3.4
KNC3_83	55.6	1.667	2.162	0.03	0.1985	0.0025	0.33696	1167.9	9.7	1167	13	1179	19	1167	13	0.1
KNC3_84	25.8	0.788	6.134	0.083	0.3481	0.0051	0.61218	1994	12	1925	24	2079	16	2079	16	7.4
KNC3_85	86.8	1.421	1.884	0.026	0.1749	0.0028	0.33795	1074.7	9.1	1039	15	1151	26	1039	15	3.3
KNC3_86	194.1	2.127	2.88	0.025	0.2356	0.0017	0.58446	1376.3	6.4	1363.6	9.1	1398.6	7	1398.6	7	2.5
KNC3_87	50.9	1.445	1.858	0.034	0.1752	0.0027	0.61121	1065	12	1041	15	1111	14	1041	15	2.3
KNC3_88	123.1	1.61	5.696	0.049	0.3496	0.0041	0.49394	1930.3	7.4	1932	20	1929	13	1929	13	0.2
KNC3_89	145.4	0.775	0.5492	0.0094	0.07049	0.00064	0.18142	444.2	6.2	439.1	3.9	475	25	439.1	3.9	1.1
KNC3_90	149	1.9	1.81	0.022	0.1766	0.0017	0.60263	1048.4	8	1048.4	9.2	1046	11	1048.4	9.2	0.0
KNC3_91	32.7	0.6918	4.167	0.067	0.2953	0.0034	0.56736	1666	13	1667	17	1660	12	1660	12	0.4
KNC3_92	154	1.68	2.741	0.027	0.2336	0.002	0.50787	1340	7.3	1353	10	1321	11	1321	11	2.4
KNC3_93	173.3	1.08	6.218	0.043	0.3684	0.0029	0.60981	2006.6	6	2021	14	1993.7	6.5	1993.7	6.5	1.4
KNC3_94	215.4	6.71	1.946	0.028	0.1887	0.0026	0.81721	1096.1	9.5	1114	14	1074	14	1114	14	1.6
KNC3_95	588	2.418	4.077	0.031	0.2972	0.0027	0.86809	1651.2	6.2	1677	13	1614.3	5	1614.3	5	3.9
KNC3_96	33.18	1.591	1.787	0.032	0.1737	0.002	0.12473	1039	12	1032	11	1065	30	1032	11	0.7
KNC3_98	104	1.745	5.271	0.048	0.3458	0.0033	0.47807	1864.6	7.6	1914	16	1801	11	1801	11	6.3
KNC3_99	405	2.69	5.448	0.043	0.3494	0.0026	0.76573	1892.1	6.8	1931	13	1849.2	6.8	1849.2	6.8	4.4
KNC3_100	62	0.5337	6.199	0.062	0.3661	0.0039	0.48581	2005.1	9	2010	19	1990	12	1990	12	1.0
KNC3_101	210.1	1.738	2.642	0.021	0.2314	0.0018	0.60463	1312.9	6	1341.9	9.2	1261.2	8.6	1261.2	8.6	6.4
KNC3_102	23.1	103	2.156	0.05	0.2076	0.0037	0.46517	1166	16	1216	20	1114	26	1114	20	4.3
KNC3_103	263	1.382	2.853	0.03	0.2415	0.0026	0.69228	1370.1	8.1	1394	13	1329.6	9.3	1329.6	9.3	4.8
KNC3_104	432	1.221	1.681	0.015	0.1623	0.002	0.80943	1001	5.7	971	11	1075	12	971	11	3.0
KNC3_105	115	1.442	1.914	0.018	0.1897	0.0014	0.40627	1085.5	6.3	1119.8	7.8	1034	11	1119.8	7.8	3.2
KNC3_106	327	1.634	2.966	0.027	0.2504	0.0025	0.65717	1398.7	6.9	1443	13	1335.7	8.4	1335.7	8.4	8.0
KNC3_107	100.5	1.087	4.352	0.045	0.3088	0.0034	0.83251	1702.6	8.6	1734	17	1660.8	8	1660.8	8	4.4

KNC3_108	123.6	1.97	0.5813	0.0099	0.07424	0.00085	0.066551	464.9	6.3	461.6	5.1	485	25	461.6	5.1	0.7
KNC3_109	49.95	1.643	3.909	0.056	0.2851	0.0032	0.6547	1614	12	1617	16	1607	13	1607	13	0.6
KNC3_110	116.8	2.282	1.926	0.02	0.1873	0.0016	0.29627	1089.7	6.9	1106.8	8.6	1051	15	1106.8	8.6	1.6
KNC3_111	131.3	1.212	1.255	0.038	0.1246	0.0022	0.56491	824	17	757	12	1025	42	757	12	8.1
KNC3_111	123.4	1.375	1.449	0.039	0.1477	0.0025	0.57156	908	16	888	14	962	21	888	14	2.2
KNC3_112	59	0.4952	4.384	0.047	0.3106	0.0041	0.43441	1708.9	8.8	1744	20	1665	13	1665	13	4.7
KNC3_113	82.3	0.965	4.788	0.057	0.2907	0.0035	0.60021	1782	10	1645	18	1949.8	9.5	1949.8	9.5	15.6
KNC3_114	71.3	0.667	3.876	0.07	0.2769	0.0052	0.63032	1608	15	1575	26	1659	15	1659	15	5.1
KNC3_114	58.3	0.5667	4.24	0.049	0.3038	0.0045	0.48175	1681.3	9.6	1710	22	1646	14	1646	14	3.9
KNC3_115	219.6	0.2958	1.648	0.012	0.1667	0.0012	0.29243	988.4	4.6	994.1	6.8	976.2	9.6	994.1	6.8	0.6
KNC3_116	52.6	1.112	1.97	0.031	0.1866	0.0023	0.41051	1106	11	1103	13	1103	22	1103	13	0.3
KNC3_117	131.3	0.879	3.19	0.037	0.2583	0.0022	0.26589	1454.2	9	1481	11	1402	18	1402	18	5.6
KNC3_118	23.75	1.369	1.88	0.042	0.1779	0.0035	0.18476	1074	14	1057	19	1122	29	1057	19	1.6
KNC3_119	65	0.932	0.455	0.016	0.05868	0.00083	0.43941	380	11	367.5	5.1	488	65	367.5	5.1	3.3
KNC3_120	35	1.134	2.376	0.041	0.207	0.003	0.21516	1234	12	1213	16	1263	22	1263	22	4.0
KNC3_121	408	11.04	1.943	0.018	0.1866	0.0019	0.84097	1095.8	6.2	1103	10	1089.2	7.1	1103	10	0.7
KNC3_122	54.7	1.31	2.125	0.03	0.1968	0.0026	0.42011	1157	10	1158	14	1163	20	1158	14	0.1
KNC4a_1	127	1.02	2.192	0.016	0.2047	0.0019	0.45815	1178.9	5.2	1200	10	1150.7	9.5	1150.7	10	1.8
KNC4a_2	45.3	1.499	2.104	0.03	0.1995	0.0021	0.071625	1149.4	9.2	1173	11	1110	19	1173	11	2.1
KNC4a_3	115	2.785	1.591	0.015	0.166	0.0014	0.56722	966.4	6	990	8	935	11	990	8	2.4
KNC4a_4	213.8	1.357	0.5154	0.0049	0.06819	0.00049	0.34042	422.4	3.3	425.2	3	413	12	425.2	3	0.7
KNC4a_5	53.7	0.497	1.809	0.018	0.1812	0.0016	0.50359	1049.4	6.6	1073.7	8.5	1010	13	1073.7	8.5	2.3
KNC4a_6	64.7	1.517	0.4602	0.0076	0.06225	0.0007	0.17506	384.1	5.3	389.3	4.2	364	22	389.3	4.2	1.4
KNC4a_7	278	0.681	0.931	0.017	0.1052	0.0013	0.11105	667.5	9	644.5	7.8	727	31	644.5	7.8	3.4
KNC4a_8	58.8	0.5626	0.94	0.015	0.112	0.0011	0.30541	672.5	7.9	684.5	6.4	650	21	684.5	6.4	1.8
KNC4a_9	109.8	0.418	0.5485	0.0064	0.07183	0.00076	0.21092	443.9	4.2	447.1	4.6	438	19	447.1	4.6	0.7
KNC4a_10	195	0.626	0.951	0.01	0.11258	0.0009	0.36134	678.3	5.2	687.7	5.2	654	13	687.7	5.2	1.4
KNC4a_11	628	2.64	0.637	0.013	0.0528	0.001	0.022635	500.4	7.8	331.4	6.4	1380	42	DISC	DISC	76.0

KNC4a_11	252.8	1.779	0.4752	0.0097	0.06034	0.00055	0.1252	394.5	6.7	377.7	3.4	524	51	377.7	3.4	4.3
KNC4a_12	307	0.9459	0.8008	0.0053	0.09746	0.00074	0.4088	597.2	3	599.5	4.3	598	12	599.5	4.3	0.4
KNC4a_13	130	1.078	0.861	0.011	0.1045	0.00083	0.46906	630.4	6	640.7	4.8	603	13	640.7	4.8	1.6
KNC4a_14	252	1.95	0.816	0.011	0.0992	0.0013	0.69124	605.4	6.1	609.7	7.5	602	18	609.7	7.5	0.7
KNC4a_15	89.3	0.754	0.808	0.01	0.09708	0.00094	0.50649	600.8	5.9	597.2	5.5	625	14	597.2	5.5	0.6
KNC4a_16	117.1	0.7669	4.75	0.031	0.3235	0.0027	0.57544	1776.6	5.7	1806	13	1755.7	8.1	1755.7	8.1	2.9
KNC4a_17	103	0.668	1.69	0.018	0.1675	0.0017	0.47821	1004.5	6.7	998	9.4	1027	11	998	9.4	0.6
KNC4a_18	11.8	2.144	2.264	0.081	0.1611	0.0023	0.086052	1196	25	963	13	1671	50	963	13	19.5
KNC4a_19	49.9	0.817	1.146	0.017	0.129	0.0015	0.42981	774.7	8.1	782	8.3	729	17	782	8.3	0.9
KNC4a_20	56.7	1.788	1.569	0.023	0.161	0.0013	0.37919	957.1	9.1	962.1	7.5	940	16	962.1	7.5	0.5
KNC4a_21	201	1.264	0.5337	0.0062	0.0693	0.0008	0.47185	434.1	4.1	431.9	4.8	458	15	431.9	4.8	0.5
KNC4a_22	438	4.52	0.459	0.01	0.0551	0.0008	0.026344	383.2	7	345.7	4.9	594	45	345.7	4.9	9.8
KNC4a_23	37.9	1.237	3.258	0.038	0.2564	0.0023	0.21076	1470.4	9	1471	12	1474	15	1474	15	0.2
KNC4a_24	109.2	1.793	0.776	0.011	0.09349	0.00097	0.37841	582.8	6.3	576.1	5.7	612	21	576.1	5.7	1.1
KNC4a_25	58.8	0.874	1.926	0.024	0.1822	0.0021	0.58075	1089.4	8.3	1079	11	1098	12	1079	11	1.0
KNC4a_26	167.1	1.642	0.4593	0.0059	0.06153	0.00059	0.17813	383.6	4.1	384.9	3.6	389	20	384.9	3.6	0.3
KNC4a_27	74.6	1.166	3.765	0.029	0.2742	0.0026	0.59865	1585.9	6.3	1562	13	1614	11	1614	11	3.2
KNC4a_28	354	1.66	0.4258	0.0043	0.05812	0.00044	0.43505	360.1	3.1	364.1	2.7	342	12	364.1	2.7	1.1
KNC4a_29	375	1.452	2.391	0.018	0.2146	0.0014	0.40871	1239.7	5.4	1253.2	7.5	1223	9.3	1223	9.3	2.5
KNC4a_30	36.9	1.147	2.554	0.037	0.2232	0.0023	0.22751	1287	11	1299	12	1271	20	1271	20	2.2
KNC4a_31	151.7	2.232	1.759	0.022	0.1737	0.002	0.62093	1029.7	8	1032	11	1026	12	1032	11	0.2
KNC4a_32	229	1.601	0.3472	0.0054	0.04776	0.00045	0.1769	302.5	4.1	300.7	2.8	308	20	300.7	2.8	0.6
KNC4a_33	231	10.7	0.5125	0.0083	0.0664	0.0011	0.49025	419.9	5.5	414.6	6.9	425	27	414.6	6.9	1.3
KNC4a_34	94.7	0.5866	1.916	0.02	0.1864	0.0018	0.48672	1086.3	6.9	1102	9.8	1057	13	1102	9.8	1.4
KNC4a_35	345	4.888	9.01	0.14	0.4041	0.0057	0.74972	2338	14	2192	27	2473.8	7	2473.8	7	11.4
KNC4a_35	230.6	5.155	10.138	0.094	0.4377	0.0044	0.69126	2447.1	8.5	2340	20	2540.6	8.8	2540.6	8.8	7.9
KNC4a_36	306.3	1.158	0.5723	0.0062	0.07343	0.00057	0.35162	459.4	4	456.8	3.4	470	15	456.8	3.4	0.6
KNC4a_37	115.9	0.663	0.962	0.012	0.113	0.0011	0.0073279	683.9	6.4	690.3	6.6	665	18	690.3	6.6	0.9
KNC4a_38	39.9	0.892	1.36	0.018	0.1425	0.0018	0.27074	871.4	7.8	859	10	913	18	859	10	1.4
KNC4a_39	159	0.7731	0.4552	0.0057	0.06006	0.00063	0.15106	380.8	4	376	3.8	391	22	376	3.8	1.3

KNC4a_40	286	3.171	1.738	0.022	0.1747	0.0025	0.57386	1025.4	7.3	1038	14	998	19	1038	14	1.2
KNC4a_40	81	1.411	2.158	0.031	0.2027	0.0036	0.39373	1167.1	9.8	1190	19	1124	26	1190	19	2.0
KNC4a_41	155	2.439	0.5198	0.0078	0.06836	0.00082	0.11295	425.5	5.4	426.3	5	424	24	426.3	5	0.2
KNC4a_42	164	2.624	1.915	0.02	0.1852	0.0017	0.29827	1086.9	7	1096.4	9	1060	13	1096.4	9	0.9
KNC4a_43	101.7	0.6841	0.4634	0.008	0.06129	0.00079	0.26531	386.3	5.6	383.5	4.8	399	29	383.5	4.8	0.7
KNC4a_44	37.8	1.633	0.75	0.014	0.0929	0.0012	0.13548	568.9	8.5	573.2	7	557	25	573.2	7	0.8
KNC4a_45	93.6	1.426	0.868	0.014	0.1036	0.0011	0.21718	634.1	7.7	635.4	6.7	622	16	635.4	6.7	0.2
KNC4a_46	38.2	0.9531	0.757	0.018	0.093	0.0012	0.066697	571	10	573.1	7.4	593	30	573.1	7.4	0.4
KNC4a_47	133	1.212	1.756	0.017	0.1746	0.0019	0.47201	1029.9	6.1	1037	11	1015	14	1037	11	0.7
KNC4a_48	70.8	2.31	1.558	0.027	0.1594	0.0025	0.5038	953	11	953	14	981	19	953	14	0.0
KNC4a_49	139	6.03	0.548	0.012	0.07042	0.00097	0.28737	443	7.9	438.7	5.8	447	31	438.7	5.8	1.0
KNC4a_50	141	2.37	0.92	0.012	0.1095	0.0017	0.50825	662	6.5	669.8	9.6	634	19	669.8	9.6	1.2
KNC4a_51	78.5	1.127	0.5	0.013	0.0677	0.0014	0.33588	412.3	8.8	422	8.3	373	30	422	8.3	2.4
KNC4a_52	277	5.73	34.26	0.46	0.74	0.011	0.66642	3617	13	3569	42	3639	14	3639	14	1.9
KNC4a_53	241.4	2.91	0.5549	0.0062	0.07225	0.00072	0.31354	449.2	4.2	450.2	4.4	455	19	450.2	4.4	0.2
KNC4a_54	30.8	2.044	2.069	0.034	0.1923	0.003	0.32738	1140	11	1133	16	1162	19	1133	16	0.6
KNC4a_55	253.4	2.169	4.66	0.11	0.2869	0.0077	0.35475	1759	19	1625	39	1941	36	1941	36	16.3
KNC4a_55	141.4	1.942	5.234	0.068	0.3448	0.0046	0.73368	1857	11	1909	22	1802.3	7.6	1802.3	7.6	5.9
KNC4a_56	83.8	1.231	2.249	0.033	0.207	0.0029	0.69734	1195	10	1212	16	1155	13	1155	16	1.4
KNC4a_57	49.7	0.704	0.844	0.02	0.1001	0.0024	0.53632	620	11	615	14	664	45	615	14	0.8
KNC4a_58	242	0.6835	0.5269	0.0074	0.06954	0.00081	0.011322	429.5	4.9	433.4	4.9	395	17	433.4	4.9	0.9
KNC4a_59	45.4	0.8173	1.99	0.039	0.1907	0.0029	0.35243	1112	14	1125	16	1091	24	1125	16	1.2
KNC4a_60	390	1.59	0.3735	0.0074	0.05109	0.00081	0.29149	322	5.4	321.2	5	316	22	321.2	5	0.2
KNC4a_61	64.2	3.14	4.228	0.046	0.3045	0.0034	0.43593	1679.9	9.2	1713	17	1643	15	1643	15	4.3
KNC4a_62	246.6	2.319	2.306	0.024	0.2129	0.0024	0.72473	1213.6	7.3	1244	13	1148.1	9.7	1148.1	13	2.5
KNC4a_63	32.7	0.87	0.866	0.022	0.1034	0.0016	0.14619	632	12	634.3	9.2	625	37	634.3	9.2	0.4
KNC4a_64	77.6	3.71	0.775	0.016	0.0946	0.0015	0.46896	582.1	9.3	582.5	9	596	24	582.5	9	0.1
KNC4a_65	146.6	2.188	1.928	0.022	0.1867	0.0022	0.59011	1090.3	7.7	1103	12	1047	12	1103	12	1.2
KNC4a_66	152.6	1.446	0.4344	0.0078	0.05775	0.00098	0.26171	366.1	5.5	361.8	6	377	28	361.8	6	1.2
KNC4a_67	57.8	2.091	2.174	0.033	0.2019	0.0028	0.57264	1173	10	1185	15	1145	15	1185	15	1.0

KNC4a_68	24.34	2.228	1.951	0.029	0.1897	0.0023	0.4045	1097.8	9.8	1119	13	1043	19	1119	13	1.9
KNC4a_69	66.6	1.955	0.84	0.017	0.1003	0.0014	0.0039227	618.4	9.2	615.9	8.1	617	36	615.9	8.1	0.4
KNC4a_70	346	0.877	0.461	0.018	0.04854	0.00077	0.11383	384	13	306.2	4.9	857	86	306.2	4.9	20.3
KNC4a_71	36.5	1.414	2.758	0.04	0.2367	0.0035	0.24963	1345	11	1369	18	1288	20	1288	20	6.3
KNC4a_72	85	1.208	9.333	0.098	0.4288	0.0053	0.63906	2370.6	9.7	2300	24	2415.5	9.5	2415.5	9.5	4.8
KNC4a_73	241.6	0.3738	3.436	0.031	0.2679	0.0025	0.79085	1512.2	7	1530	13	1484.6	8.7	1484.6	8.7	3.1
KNC4a_74	127	1.528	1.865	0.024	0.1826	0.0021	0.58504	1068.3	8.4	1081	12	1032	15	1081	12	1.2
KNC4a_75	16.23	0.722	0.771	0.033	0.0897	0.0018	0.13102	577	19	554	11	680	61	554	11	4.0
KNC4a_76	32.07	1.09	1.983	0.034	0.1927	0.0026	0.34329	1110	11	1136	14	1047	19	1136	14	2.3
KNC4a_77	135.4	2.146	2.237	0.021	0.2065	0.002	0.30409	1192.3	6.5	1210	11	1159	14	1159	11	1.5
KNC4a_78	63.9	0.73	1.645	0.021	0.1656	0.002	0.40111	988.3	7.8	988	11	990	18	988	11	0.0
KNC4a_79	383	1.359	5.82	0.065	0.3225	0.0042	0.82733	1949	9.6	1802	20	2099.4	7.8	2099.4	7.8	14.2
KNC4a_80	150.8	0.666	0.875	0.017	0.1034	0.0016	0.70727	637.4	9.1	634.2	9.3	643	18	634.2	9.3	0.5
KNC4a_81	211	1.912	2.156	0.018	0.2031	0.002	0.56358	1167.4	5.6	1192	11	1128.1	9.5	1192	11	2.1
KNC4a_82	136.3	0.7692	5.577	0.042	0.3638	0.003	0.6559	1912.1	6.4	2000	14	1818.8	6.9	1818.8	6.9	10.0
KNC4a_83	169.4	1.59	5.796	0.07	0.3533	0.0056	0.62926	1945	10	1954	26	1937	14	1937	14	0.9
KNC4a_84	130.8	0.7107	0.866	0.01	0.103	0.00094	0.33688	633.3	5.5	631.9	5.5	624	13	631.9	5.5	0.2
KNC4a_85	53	1.807	1.8	0.031	0.1771	0.0024	0.39519	1044	11	1051	13	1024	24	1051	13	0.7
KNC4a_86	78.5	0.884	0.89	0.013	0.1074	0.0014	0.23671	646.9	7.1	657.8	7.9	611	23	657.8	7.9	1.7
KNC4a_87	139.6	1.242	1.703	0.027	0.1708	0.0014	0.40453	1008.7	9.8	1016.6	7.6	995	20	1016.6	7.6	0.8
KNC4a_88	140	1.323	0.905	0.011	0.1081	0.001	0.20093	655	5.9	661.7	6.1	637	15	661.7	6.1	1.0
KNC4a_89	129.8	0.676	4.49	0.043	0.3144	0.0038	0.67203	1728.5	8	1762	19	1679	11	1679	11	4.9
KNC4a_90	167.8	0.701	0.4553	0.0069	0.06095	0.00069	0.32098	380.8	4.8	381.4	4.2	378	23	381.4	4.2	0.2
KNC4a_91	85.4	1.451	1.903	0.025	0.1862	0.0032	0.69605	1081.6	8.6	1100	17	1047	12	1100	17	1.7
KNC4a_93	115.3	1.86	0.507	0.01	0.0683	0.00075	0.199	416.2	6.8	425.9	4.5	381	26	425.9	4.5	2.3
KNC4a_94	389	4.87	0.584	0.026	0.0626	0.0012	0.78327	465	16	391.2	7.4	800	120	391.2	7.4	15.9
KNC4a_95	114	0.736	0.996	0.014	0.1186	0.0019	0.4432	701.3	6.9	722	11	632	22	722	11	3.0
KNC4a_96	31.4	0.887	4.366	0.056	0.3039	0.0034	0.34036	1705	11	1710	17	1699	15	1699	15	0.6
KNC4a_97	36.7	0.848	0.94	0.018	0.1048	0.0016	0.2065	672.3	9.4	642.6	9.1	775	26	642.6	9.1	4.4
KNC4a_98	59.8	1.374	0.623	0.012	0.0791	0.001	0.02337	491.2	7.3	490.4	6	501	25	490.4	6	0.2

KNC4a_99	86.9	0.767	2.051	0.025	0.1945	0.0019	0.41766	1132.1	8.2	1146	10	1100	13	1146	10	1.2
KNC4a_100	114	3.33	1.637	0.032	0.149	0.0027	0.53024	984	12	895	15	1207	24	895	15	9.0
KNC4a_100	34.4	1.081	1.685	0.032	0.1616	0.0039	0.19954	1002	12	966	22	1071	38	966	22	3.6
KNC4a_101	133	0.751	0.868	0.016	0.1038	0.0018	0.36502	633.6	8.9	636	10	645	28	636	10	0.4
KNC4a_102	69.4	2.105	2.113	0.03	0.1966	0.0023	0.72403	1153.8	9.4	1159	13	1139	10	1159	13	0.5
KNC4a_103	229	1.93	4.088	0.04	0.2934	0.0033	0.75986	1651.3	8	1658	16	1633.3	8.9	1633.3	8.9	1.5
KNC4a_104	88	0.2258	0.738	0.012	0.0919	0.0016	0.022076	560.7	6.9	566.4	9.2	549	25	566.4	9.2	1.0
KNC4a_105	54.3	1.017	0.896	0.02	0.106	0.0015	0.0065935	649	11	649.6	8.5	636	33	649.6	8.5	0.1
KNC4a_106	426	1.812	0.4221	0.0048	0.05649	0.00064	0.51633	357.4	3.5	354.2	3.9	365	16	354.2	3.9	0.9
KNC4a_107	158.4	4.38	0.4754	0.0083	0.06164	0.00071	0.25712	394.6	5.7	385.6	4.3	439	24	385.6	4.3	2.3
KNC4a_108	71	0.991	0.864	0.014	0.1044	0.0013	0.10615	632	7.8	639.9	7.4	605	28	639.9	7.4	1.3
KNC4a_109	225	1.3341	0.5573	0.0071	0.07039	0.00063	0.24512	449.6	4.6	438.5	3.8	506	19	438.5	3.8	2.5
KNC4a_110	113.6	1.134	0.593	0.011	0.07697	0.00091	0.3268	473.5	7.1	477.9	5.5	460	25	477.9	5.5	0.9
KNC4a_111	17.64	0.962	3.406	0.059	0.259	0.0037	0.36269	1504	14	1484	19	1523	21	1523	21	2.6
KNC4a_112	80.4	1.834	2.525	0.026	0.2191	0.0031	0.55943	1278.7	7.7	1277	16	1275	11	1275	11	0.2
KNC4a_113	146	2.227	1.802	0.021	0.1764	0.0019	0.13688	1045.6	7.7	1047	10	1027	16	1047	10	0.1
KNC4a_114	101.9	1.107	0.489	0.0099	0.06443	0.00092	0.20763	405.5	7	402.4	5.6	407	31	402.4	5.6	0.8
KNC4a_115	89.1	1.51	0.803	0.012	0.0959	0.0013	0.24692	598.3	6.9	590	7.5	609	22	590	7.5	1.4
KNC4a_116	81.7	1.233	0.876	0.015	0.1042	0.0012	0.55572	638	7.9	639	7.2	639	19	639	7.2	0.2
KNC4a_117	146	1.461	0.876	0.012	0.1046	0.0011	0.043456	639.3	6.2	641.2	6.6	634	20	641.2	6.6	0.3
KNC4a_118	226	10.54	0.775	0.012	0.095	0.0012	0.71826	582	6.8	584.9	6.8	582	24	584.9	6.8	0.5
KNC4a_119	78.4	0.9542	0.441	0.0093	0.05879	0.00078	0.21379	370.6	6.6	368.2	4.8	375	24	368.2	4.8	0.6
KNC4a_120	112.5	1.656	2.037	0.027	0.1921	0.0027	0.60237	1127.2	8.9	1132	14	1112	15	1132	14	0.4
KNC4a_121	62.85	1.979	1.869	0.022	0.1835	0.0016	0.33974	1069.6	7.6	1086.1	9	1018	15	1086.1	9	1.5
KNC4a_122	94.3	0.1285	14.26	0.12	0.5457	0.0063	0.63907	2767.2	8	2807	26	2738.4	8.9	2738.4	8.9	2.5
KNC4a_122	58.2	0.1193	15.25	0.2	0.584	0.011	0.79355	2833	12	2963	43	2729	13	2729	13	8.6
13SAN04_1	48.7	1.408	1.758	0.021	0.1745	0.0017	0.43889	1029.8	7.5	1036.7	9.4	1025	12	1036.7	9.4	0.7
13SAN04_2	96	0.621	2.076	0.021	0.1957	0.0017	0.67239	1140.4	7.1	1151.9	9.4	1130.1	8	1151.9	9.4	1.0

13SAN04_3	103.7	1.2301	1.845	0.014	0.1797	0.0014	0.53988	1062.2	5	1065.3	7.9	1068	12	1065.3	7.9	0.3
13SAN04_4	91.4	0.718	0.5514	0.0071	0.07219	0.0008	0.2683	445.7	4.6	449.3	4.8	419	17	449.3	4.8	0.8
13SAN04_5	249	2.217	1.756	0.014	0.1739	0.0016	0.65716	1029.7	5.4	1033.5	8.7	1022.1	9.1	1033.5	8.7	0.4
13SAN04_6	18.13	9.15	1.68	0.035	0.1676	0.0023	0.36893	1001	14	999	13	1001	30	999	13	0.2
13SAN04_7	15.37	1.31	1.484	0.039	0.1507	0.0027	0.42472	922	16	905	15	999	28	905	15	1.8
13SAN04_8	40	0.865	2.152	0.026	0.2015	0.0019	0.34207	1165.2	8.3	1183	10	1157	16	1183	10	1.5
13SAN04_9	106.9	0.864	0.5716	0.007	0.07327	0.00072	0.32088	458.9	4.5	455.8	4.3	461	17	455.8	4.3	0.7
13SAN04_10	20.65	1.225	2.235	0.027	0.2029	0.0024	0.49957	1191.4	8.4	1191	13	1207	17	1191	13	0.0
13SAN04_11	109	1.43	2.002	0.029	0.1926	0.0023	0.69169	1115.5	9.7	1135	12	1088	12	1135	12	1.7
13SAN04_12	62.8	1.762	1.772	0.018	0.1727	0.0018	0.13545	1034.9	6.6	1027	9.9	1035	17	1027	9.9	0.8
13SAN04_13	25.3	0.813	1.901	0.028	0.18	0.0021	0.29282	1082	10	1067	12	1100	21	1067	12	1.4
13SAN04_14	68.08	0.882	1.814	0.024	0.1773	0.002	0.76263	1050	8.5	1052	11	1051	13	1052	11	0.2
13SAN04_15	5.48	0.2939	11.21	0.26	0.4174	0.0098	0.6639	2536	22	2252	46	2756	17	2756	17	18.3
13SAN04_16	220.9	4.46	2.149	0.012	0.1995	0.0014	0.58067	1164.7	3.7	1172.6	7.4	1153.8	5.9	1172.6	7.4	0.7
13SAN04_17	494	1.944	1.841	0.011	0.1807	0.0011	0.61867	1060.2	3.9	1070.9	6.2	1046.4	5.3	1070.9	6.2	1.0
13SAN04_18	99.4	1.427	1.744	0.019	0.1736	0.0018	0.60307	1024.4	7.1	1031.6	9.7	1012	13	1031.6	9.7	0.7
13SAN04_19	90	1.121	2.104	0.023	0.1945	0.0016	0.58084	1151	7.4	1145.6	8.6	1159	10	1145.6	8.6	0.5
13SAN04_20	58.9	80.6	1.976	0.03	0.1897	0.0029	0.72455	1107	10	1119	16	1097	11	1119	16	1.1
13SAN04_21	74	0.985	2.119	0.026	0.1943	0.0017	0.41605	1154.5	8.4	1144.8	8.9	1174	11	1144.8	8.9	0.8
13SAN04_22	193.3	1.09	0.9352	0.0098	0.10923	0.00088	0.608	670.1	5.1	668.2	5.1	680.4	7.8	668.2	5.1	0.3
13SAN04_23	46.8	0.865	3.294	0.034	0.2607	0.0021	0.49863	1479.1	8	1493	11	1475	9.5	1475	9.5	1.2
13SAN04_24	137.4	1.777	1.962	0.035	0.1851	0.0024	0.90573	1101	12	1094	13	1128	12	1094	13	0.6
13SAN04_25	42	0.7271	1.951	0.038	0.1824	0.0032	0.57376	1101	12	1080	17	1160	16	1080	17	1.9
13SAN04_26	91.1	0.761	2.206	0.019	0.2005	0.0014	0.39316	1182.7	6	1177.9	7.4	1198	11	1177.9	7.4	0.4
13SAN04_27	187.7	1.394	1.664	0.014	0.1647	0.0016	0.60893	994.6	5.2	982.8	8.7	1018.8	9.1	982.8	8.7	1.2
13SAN04_28	795	1.269	6.031	0.027	0.3397	0.0018	0.64747	1980.3	3.9	1885.1	8.4	2078.2	4.1	2078.2	4.1	9.3
13SAN04_29	9.86	0.246	0.9	0.052	0.0975	0.0025	0.13705	646	27	599	15	834	86	599	15	7.3
13SAN04_30	63.2	0.4499	13.72	0.11	0.5286	0.0039	0.4154	2730.2	7.3	2735	16	2723.2	8.2	2723.2	8.2	0.4
13SAN04_31	113.8	1.059	1.405	0.024	0.1412	0.0023	0.5811	890	10	851	13	994	12	851	13	4.4
13SAN04_32	246	2.131	1.686	0.013	0.167	0.0011	0.54011	1003.6	4.6	995.4	6.2	1025.3	7.7	995.4	6.2	0.8

13SAN04_33	44.5	1.294	2.117	0.026	0.1955	0.0022	0.37175	1153.8	8.5	1151	12	1166	16	1151	12	0.2
13SAN04_34	64.3	1.325	13.347	0.089	0.5311	0.0038	0.57902	2704.3	6.3	2746	16	2669.5	6.6	2669.5	6.6	2.9
13SAN04_35	155	1.71	2.451	0.024	0.2169	0.0021	0.81428	1257.1	7.1	1265	11	1247	7.1	1247	7.1	1.4
13SAN04_36	67.4	3.45	1.783	0.025	0.1761	0.0018	0.67102	1038.6	9	1045.6	9.7	1026	15	1045.6	9.7	0.7
13SAN04_37	36.3	1.554	1.682	0.027	0.1653	0.0022	0.67104	1001	10	986	12	1044	16	986	12	1.5
13SAN04_38	33.64	1.28	1.738	0.022	0.1737	0.0017	0.0032913	1022.2	8	1032.4	9.6	1016	17	1032.4	9.6	1.0
13SAN04_39	65.9	6.55	2.531	0.031	0.2163	0.0025	0.6159	1281.7	9.4	1262	13	1316	13	1316	13	4.1
13SAN04_40	178	4.63	1.672	0.014	0.1695	0.0016	0.61242	997.8	5.2	1009	8.8	985.5	9.8	1009	8.8	1.1
13SAN04_41	57.2	1.3174	1.856	0.018	0.1819	0.0016	0.20928	1066.3	6.2	1077.2	8.6	1050	13	1077.2	8.6	1.0
13SAN04_42	85.9	1.688	1.873	0.021	0.1819	0.0016	0.22425	1072	7.4	1077.1	8.8	1061	10	1077.1	8.8	0.5
13SAN04_43	115.6	0.495	1.729	0.023	0.17	0.0022	0.8899	1018.8	8.8	1012	12	1031	11	1012	12	0.7
13SAN04_44	83.9	1.039	2.361	0.02	0.2115	0.0015	0.50117	1230.5	6	1236.7	8.2	1214.9	9.3	1214.9	9.3	1.8
13SAN04_45	40.5	1.341	2.033	0.024	0.1875	0.0016	0.44022	1127.2	7.8	1107.9	8.5	1167	15	1107.9	8.5	1.7
13SAN04_46	127.9	1.203	1.855	0.019	0.1793	0.0014	0.08916	1064.6	6.7	1063	7.4	1067	14	1063	7.4	0.2
13SAN04_47	83.9	0.753	1.445	0.022	0.1503	0.0022	0.73901	907.1	9.2	903	12	929.4	9.5	903	12	0.5
13SAN04_48	57.7	0.762	4.371	0.048	0.2978	0.0036	0.7002	1706.5	9.1	1680	18	1757	10	1757	10	4.4
13SAN04_49	195.2	4.12	1.682	0.012	0.16948	0.00092	0.48431	1001.7	4.4	1009.2	5.1	984.3	6.8	1009.2	5.1	0.7
13SAN04_50	20.8	1.902	2.083	0.046	0.1948	0.0034	0.44944	1142	15	1147	18	1142	22	1147	18	0.4
13SAN04_51	57.5	1.453	3.312	0.035	0.2615	0.0024	0.16108	1484.4	8.3	1497	12	1456	14	1456	14	2.8
13SAN04_52	48.9	1.555	2.446	0.028	0.2103	0.0025	0.80439	1255.5	8.4	1230	13	1318	14	1318	14	6.7
13SAN04_53	204	1.64	1.9	0.018	0.1832	0.0015	0.84141	1081.8	6.8	1084.3	7.9	1078.6	8.3	1084.3	7.9	0.2
13SAN04_54	145.2	1.313	1.743	0.015	0.1744	0.0015	0.28744	1024.1	5.6	1037.3	8.2	1004.1	7.9	1037.3	8.2	1.3
13SAN04_55	254	0.943	2.042	0.014	0.1844	0.0013	0.6241	1129.3	4.8	1091.1	7.3	1203	10	1091.1	7.3	3.4
13SAN04_56	53.7	0.933	0.597	0.014	0.0754	0.0014	0.12807	474.9	8.6	468.6	8.4	534	30	468.6	8.4	1.3
13SAN04_57	241.1	1.342	2.247	0.015	0.2072	0.0016	0.62448	1196.3	4.8	1213.8	8.3	1171.6	7.6	1171.6	8.3	1.5
13SAN04_58	83.7	1.424	2.142	0.024	0.1983	0.0016	0.52854	1161.9	7.8	1167.4	8.6	1146	11	1167.4	8.6	0.5
13SAN04_59	92.3	1.696	3.238	0.027	0.2548	0.0018	0.28917	1466.9	6.6	1463.3	9.1	1471	8.3	1471	8.3	0.5
13SAN04_60	66.8	1.222	1.852	0.026	0.1779	0.0019	0.46363	1063.5	9.2	1055	10	1081	14	1055	10	0.8
13SAN04_61	80.2	1.932	1.315	0.022	0.1377	0.0023	0.46089	851.8	9.5	832	13	932	25	832	13	2.3
13SAN04_62	38.7	1.189	2.954	0.05	0.2362	0.0032	0.70588	1396	13	1366	17	1428	11	1428	11	4.3

13SAN04_63	49.6	1.415	2.181	0.03	0.1998	0.0026	0.66554	1174.3	9.8	1174	14	1175	15	1174	14	0.0
13SAN04_64	44.1	1.998	1.744	0.021	0.1723	0.0019	0.5576	1024.4	7.7	1025	10	1026	16	1025	10	0.1
13SAN04_65	180	1.989	2.202	0.03	0.2063	0.0024	0.63801	1184	10	1209	13	1136	12	1136	13	2.1
13SAN04_65	90	1.025	2.763	0.034	0.2329	0.0023	0.51851	1345.1	9.1	1349	12	1333	16	1333	16	1.2
13SAN04_66	104.8	1.902	2.325	0.023	0.2079	0.0013	0.48675	1219.4	7.2	1217.5	6.9	1226	10	1226	10	0.7
13SAN04_67	14.3	1.536	1.722	0.043	0.1752	0.0036	0.40549	1019	16	1040	20	1004	27	1040	20	2.1
13SAN04_68	32.3	1.567	2.015	0.03	0.1905	0.002	0.27847	1121	9.9	1124	11	1114	19	1124	11	0.3
13SAN04_69	604	3.35	2.05	0.02	0.1918	0.0017	0.86116	1131.8	6.5	1131	8.9	1135.2	7.2	1131	8.9	0.1
13SAN04_70	207.1	1.604	2.125	0.014	0.1917	0.0013	0.55354	1156.7	4.4	1130.5	7.1	1206.5	8.3	1130.5	7.1	2.3
13SAN04_71	185	0.795	0.5954	0.0067	0.07639	0.00057	0.32031	474.2	4.3	474.5	3.4	473	16	474.5	3.4	0.1
13SAN04_72	38.2	1.205	1.661	0.035	0.1558	0.0024	0.3965	995	14	933	13	1102	17	933	13	6.2
13SAN04_73	315	1.455	2.207	0.016	0.2041	0.0016	0.89703	1183	5.1	1197.2	8.8	1158	6.6	1197.2	8.8	1.2
13SAN04_74	713	2.25	1.95	0.027	0.1867	0.0024	0.9066	1099.2	8.7	1105	13	1086.6	9.8	1105	13	0.5
13SAN04_75	25.19	1.049	1.443	0.034	0.1471	0.0019	0.35253	908	14	887	10	964	23	887	10	2.3
13SAN04_76	178.4	2.275	1.984	0.02	0.1906	0.0017	0.6899	1109.7	6.9	1124.4	9.2	1077.5	8.2	1124.4	9.2	1.3
13SAN04_77	428	1.833	1.825	0.03	0.179	0.0029	0.87521	1054	11	1061	16	1061.3	9.1	1061	16	0.7
13SAN04_77	413	0.51	2.393	0.019	0.2159	0.0017	0.56334	1240.3	5.6	1260.2	9.1	1199.7	9.5	1199.7	9.1	1.6
13SAN04_78	155.1	1.429	2.947	0.025	0.2402	0.0022	0.79826	1393.8	6.5	1387	12	1396.9	6.7	1396.9	6.7	0.7
13SAN04_79	92.4	1.978	1.805	0.02	0.1773	0.0017	0.48868	1046.8	7.2	1052.2	9.2	1042	13	1052.2	9.2	0.5
13SAN04_80	22.9	0.6802	2.306	0.042	0.2103	0.003	0.29501	1213	13	1230	16	1213	22	1213	22	1.4
13SAN04_81	95.1	0.889	3.502	0.028	0.2727	0.0022	0.60028	1527.3	6.4	1555	11	1493.7	7.5	1493.7	7.5	4.1
13SAN04_82	72.3	1.603	1.826	0.02	0.1798	0.0014	0.41245	1054.5	7.3	1065.9	7.5	1031	12	1065.9	7.5	1.1
13SAN04_83	265.2	2.662	2.258	0.015	0.2078	0.0014	0.70013	1199.6	4.7	1217.1	7.5	1173.8	6	1173.8	7.5	1.5
13SAN04_84	41.07	2.039	2.541	0.031	0.2216	0.0025	0.7582	1284.7	8.6	1290	13	1278	13	1278	13	0.9
13SAN04_85	333	5.83	3.615	0.029	0.2721	0.0022	0.88782	1552.4	6.4	1551	11	1554.9	3.9	1554.9	3.9	0.3
13SAN04_86	361	0.733	0.3105	0.0087	0.0318	0.0015	0.094768	276.1	6.3	201.6	9.5	936	97	201.6	9.5	27.0
13SAN04_86	69.7	0.982	0.575	0.013	0.0728	0.001	0.05172	461.1	8.2	452.7	6.2	505	32	452.7	6.2	1.8
13SAN04_87	209.6	2.745	1.919	0.021	0.1852	0.0016	0.38002	1087.1	7.5	1095.4	8.8	1069	11	1095.4	8.8	0.8
13SAN04_88	133.9	1.658	1.699	0.019	0.168	0.0017	0.84927	1007.7	7.1	1001.2	9.5	1018	11	1001.2	9.5	0.6
13SAN04_89	44.5	1.524	2.13	0.024	0.1996	0.0019	0.44584	1158	7.9	1173	10	1137	13	1173	10	1.3

13SAN04_90	612	7.63	0.5622	0.0038	0.0725	0.00039	0.49453	452.9	2.5	451.2	2.3	461	8.7	451.2	2.3	0.4
13SAN04_91	50.6	2.491	1.692	0.016	0.1708	0.0018	0.19297	1005.1	6	1016.3	9.7	992	15	1016.3	9.7	1.1
13SAN04_92	350.5	5.713	2.005	0.012	0.1873	0.0011	0.67594	1117.1	4.1	1106.8	5.8	1147.5	6.2	1106.8	5.8	0.9
13SAN04_93	79.6	2.07	1.85	0.057	0.1722	0.0039	0.7148	1062	20	1024	21	1143	29	1024	21	3.6
13SAN04_94	114.8	2.143	1.856	0.014	0.1814	0.0012	0.28426	1066.2	4.7	1074.4	6.7	1054	11	1074.4	6.7	0.8
13SAN04_95	22.95	1.039	1.75	0.061	0.1674	0.0025	0.040894	1026	22	998	14	1067	43	998	14	2.7
13SAN04_95	13.39	0.601	2.165	0.098	0.193	0.0043	0.40373	1181	31	1137	23	1226	41	1137	23	3.7
13SAN04_96	69.7	1.833	1.614	0.018	0.1651	0.0013	0.29533	976	7	985.2	7.4	959	14	985.2	7.4	0.9
13SAN04_97	162.5	2.067	3.432	0.025	0.2699	0.0019	0.72462	1511.5	5.6	1540	9.7	1477.3	6	1477.3	6	4.2
13SAN04_98	34.9	0.52	2.314	0.052	0.214	0.0036	0.48929	1215	16	1250	19	1178	20	1178	19	2.9
13SAN04_99	58.1	1.381	2.869	0.027	0.2345	0.0021	0.29148	1373.4	7.1	1358	11	1411	12	1411	12	3.8
13SAN04_100	80.3	1.313	2.952	0.029	0.2473	0.0019	0.30017	1395.9	7.3	1424.5	9.6	1361.3	9.8	1361.3	9.8	4.6
13SAN04_101	80.9	1.358	1.473	0.016	0.149	0.0013	0.23881	919.1	6.5	895.3	7.5	991	15	895.3	7.5	2.6
13SAN04_102	36.82	1.139	1.628	0.028	0.1632	0.0019	0.16823	980	10	976	11	1014	29	976	11	0.4
13SAN04_103	223	1.841	2.085	0.031	0.196	0.002	0.85811	1143	10	1154	11	1126.4	9.1	1154	11	1.0
13SAN04_104	94.7	1.522	1.663	0.018	0.1687	0.0014	0.16578	994	7	1004.8	7.6	970	14	1004.8	7.6	1.1
13SAN04_105	250	1.814	1.762	0.014	0.1754	0.0012	0.32901	1031.9	5.2	1041.9	6.5	1010.7	8.9	1041.9	6.5	1.0
13SAN04_106	64.1	1.21	1.627	0.034	0.1604	0.003	0.77944	979	13	959	17	1027	13	959	17	2.0
13SAN04_107	127.4	1.569	1.534	0.013	0.1592	0.001	0.40373	944	5.1	952.4	5.8	923	10	952.4	5.8	0.9
13SAN04_108	91.6	1.26	1.789	0.015	0.176	0.001	0.3214	1041.1	5.6	1045	5.7	1023	11	1045	5.7	0.4
13SAN04_109	127	2.055	3.188	0.051	0.2544	0.0027	0.70026	1453	12	1461	14	1438	15	1438	15	1.6
13SAN04_110	145.2	2.321	1.889	0.016	0.1844	0.0013	0.75836	1077.1	5.6	1090.9	7	1050.2	9.5	1090.9	7	1.3
13SAN04_111	39.8	1.057	2.085	0.04	0.1922	0.002	0.20333	1144	13	1133	11	1183	26	1133	11	1.0
13SAN04_112	31.7	1.161	2.08	0.034	0.1901	0.0027	0.48375	1146	11	1122	15	1189	18	1122	15	2.1
13SAN04_113	150.2	1.879	1.673	0.015	0.1665	0.0016	0.4107	997.9	5.8	992.5	8.8	1015	13	992.5	8.8	0.5
13SAN04_114	173.9	1.233	1.824	0.016	0.1789	0.0012	0.57698	1053.7	5.6	1060.8	6.8	1051.2	8.7	1060.8	6.8	0.7
13SAN04_115	54.6	1.101	1.649	0.03	0.1665	0.0022	0.47751	988	11	993	12	999	15	993	12	0.5
13SAN04_116	141.6	2.73	1.807	0.015	0.1774	0.0016	0.59846	1048.4	5.6	1052.9	9	1042	10	1052.9	9	0.4
13SAN04_117	282	1.606	3.736	0.022	0.2801	0.0017	0.64358	1579	4.6	1591.8	8.4	1560.6	4.8	1560.6	4.8	2.0
13SAN04_118	213.1	1.983	2.268	0.018	0.207	0.0018	0.70093	1202	5.6	1212.5	9.4	1180.7	6.8	1180.7	9.4	0.9

13SAN04_119	250	2.59	3.424	0.029	0.2683	0.0032	0.72742	1509.7	6.7	1532	16	1477.6	5.9	1477.6	5.9	3.7
13SAN04_120	374.6	1.8	11.06	0.15	0.4612	0.0048	0.82636	2527	12	2445	21	2589	10	2589	10	5.6
13SAN05_1	1260	4.74	0.549	0.016	0.0717	0.0015	0.76309	444	10	446.1	8.9	453	52	446.1	8.9	0.5
13SAN05_1	242.8	8.88	3.271	0.07	0.2503	0.0049	0.82665	1473	17	1439	25	1495	26	1495	26	3.7
13SAN05_2	115.9	2.43	3.846	0.063	0.2728	0.0068	0.67254	1603	13	1554	34	1649	38	1649	38	5.8
13SAN05_3	488	3.658	1.696	0.024	0.1675	0.0027	0.66268	1006.5	8.9	1002	15	995	26	995	26	0.7
13SAN05_4	167	2.84	0.593	0.019	0.076	0.002	0.57103	473	12	472	12	443	50	472	12	0.2
13SAN05_5	123.1	3.18	3.942	0.086	0.2739	0.0065	0.618	1625	19	1560	33	1720	39	1720	39	9.3
13SAN05_7	75	1.71	2.47	0.073	0.2062	0.0051	0.78821	1267	22	1207	27	1377	35	1377	35	12.3
13SAN05_8	81.4	3.14	12.74	0.15	0.4754	0.0062	0.6844	2660	11	2507	27	2764	14	2764	14	9.3
13SAN05_9	187	4.66	13.7	0.3	0.506	0.011	0.83321	2725	21	2635	48	2787	22	2787	22	5.5
13SAN05_10	180.7	1.334	1.943	0.026	0.1836	0.0019	0.55872	1095.5	8.9	1086	10	1113	22	1113	22	2.4
13SAN05_11	97	3.5	2.78	0.13	0.2267	0.006	0.90311	1337	36	1316	32	1403	48	1403	48	6.2
13SAN05_12	277	1.122	0.5144	0.0079	0.0676	0.0011	0.42302	421.1	5.3	421.5	6.3	422	36	421.5	6.3	0.1
13SAN05_13	603	0.905	0.4151	0.0069	0.05632	0.00084	0.73312	352.3	5	353.1	5.1	350	27	353.1	5.1	0.2
13SAN05_14	463	1.321	0.516	0.0074	0.0671	0.00085	0.39394	422.2	4.9	418.6	5.1	426	30	418.6	5.1	0.9
13SAN05_15	491	2.58	1.594	0.029	0.1612	0.003	0.73686	967	11	963	17	975	29	975	29	1.2
13SAN05_16	422	1.04	0.4735	0.0076	0.063	0.0011	0.49745	393.3	5.2	393.5	6.6	395	36	393.5	6.6	0.1
13SAN05_17	227.3	2.286	3.963	0.058	0.2643	0.004	0.7948	1627	12	1514	20	1778	17	1778	17	14.8
13SAN05_18	202.2	1.758	0.66	0.011	0.0834	0.0011	0.31769	514.4	6.8	516.3	6.5	504	38	516.3	6.5	0.4
13SAN05_19	390	1.851	0.5046	0.0078	0.06578	0.00069	0.27234	414.6	5.2	410.6	4.2	431	38	410.6	4.2	1.0
13SAN05_20	191	2.67	2.462	0.053	0.1717	0.0038	0.67881	1259	16	1021	21	1684	30	DISC	DISC	39.4
13SAN05_21	217	1.531	4.564	0.074	0.3078	0.0048	0.74746	1741	13	1735	23	1741	21	1741	21	0.3
13SAN05_22	216	2.636	2.417	0.026	0.2153	0.0025	0.56586	1250.2	8.3	1257	13	1225	23	1225	23	2.6
13SAN05_23	184	4.3	4.087	0.079	0.2822	0.0042	0.66324	1650	16	1602	21	1711	25	1711	25	6.4
13SAN05_25	140	1.506	2.309	0.031	0.2063	0.0021	0.20811	1214.4	9.4	1209	11	1247	31	1247	31	3.0
13SAN05_26	124	2.41	13	0.26	0.482	0.011	0.81412	2678	19	2536	46	2803	21	2803	21	9.5
13SAN05_27	48.9	2.85	1.315	0.033	0.1359	0.0021	0.2654	851	15	821	12	951	57	821	12	3.5

13SAN05_28	199.4	1.022	0.4295	0.0088	0.05805	0.00084	0.34359	362.4	6.3	363.7	5.1	380	51	363.7	5.1	0.4
13SAN05_29	257	2.16	4.506	0.043	0.3013	0.0027	0.58291	1731.4	7.9	1698	13	1774	15	1774	15	4.3
13SAN05_30	168	1.422	3.725	0.041	0.276	0.0038	0.55902	1576.2	8.9	1571	19	1596	21	1596	21	1.6
13SAN05_31	105.5	0.569	12.38	0.12	0.4796	0.005	0.5363	2632.7	9.5	2525	22	2719	17	2719	17	7.1
13SAN05_32	67.5	1.8	2.55	0.046	0.2176	0.0036	0.3888	1285	13	1269	19	1323	34	1323	34	4.1
13SAN05_33	263.7	5.03	1.317	0.018	0.1329	0.0018	0.69943	854.7	7.6	804	10	987	20	804	10	5.9
13SAN05_34	282	1.487	4.887	0.042	0.3163	0.0038	0.51696	1800.5	7	1771	18	1831	20	1831	20	3.3
13SAN05_35	177.7	0.878	1.902	0.024	0.1795	0.0021	0.33173	1080.9	8.5	1064	11	1116	28	1116	28	4.7
13SAN05_36	200	1.981	0.524	0.01	0.06734	0.00099	0.16739	427.2	6.9	420	6	451	49	420	6	1.7
13SAN05_37	96.7	1.251	3.239	0.05	0.2544	0.0026	0.10266	1465	12	1461	13	1466	34	1466	34	0.3
13SAN05_38	105	1.805	1.693	0.036	0.1707	0.0025	0.50224	1005	14	1016	14	975	39	975	39	4.2
13SAN05_39	164	1.537	0.465	0.01	0.06102	0.00091	0.21629	388.2	7.2	381.8	5.5	426	49	381.8	5.5	1.6
13SAN05_40	293	0.914	4.105	0.064	0.2913	0.0051	0.89148	1654	13	1647	26	1663	15	1663	15	1.0
13SAN05_42	167.7	1.214	1.966	0.023	0.1854	0.0018	0.36121	1103.2	8	1096.1	9.7	1115	28	1115	28	1.7
13SAN05_43	1022	1.76	12.78	0.15	0.5005	0.0075	0.71445	2663	11	2615	32	2695	18	2695	18	3.0
13SAN05_44	250	2.52	2.243	0.056	0.1865	0.0025	0.30207	1198	19	1102	14	1382	53	1382	53	20.3
13SAN05_45	316	9.72	2.073	0.042	0.1717	0.0025	0.78567	1139	14	1024	15	1355	28	1355	28	24.4
13SAN05_46	142.4	3.437	1.964	0.045	0.1834	0.0043	0.76673	1104	15	1084	23	1132	32	1132	32	4.2
13SAN05_47	223	1.453	3.279	0.04	0.256	0.0027	0.76968	1478.1	9.6	1469	14	1482	17	1482	17	0.9
13SAN05_48	143.2	1.84	2.04	0.13	0.1397	0.0023	0.19388	1116	43	843	13	1640	130	843	13	24.5
13SAN05_49	341	1.701	2.175	0.026	0.1974	0.0021	0.57381	1175	8.7	1161	11	1194	21	1194	21	2.8
13SAN05_51	309	2.38	0.564	0.032	0.07026	0.0009	0.90917	443.7	6.7	437.7	5.4	468	50	437.7	5.4	1.4
13SAN05_52	145.7	1.761	1.888	0.022	0.1844	0.0016	0.21684	1076.4	7.7	1091	8.9	1047	28	1047	28	4.2
13SAN05_53	236	1.223	3.229	0.035	0.2579	0.0026	0.11757	1463.5	8.4	1479	13	1436	21	1436	21	3.0
13SAN05_54	279	1.892	1.677	0.028	0.1652	0.0026	0.64388	1001	11	985	14	1019	25	1019	25	3.3
13SAN05_55	920	5.7	1.945	0.037	0.1808	0.0033	0.86112	1097	13	1071	18	1131	18	1131	18	5.3
13SAN05_56	455	1.184	0.4809	0.0066	0.06342	0.0007	0.38282	398.5	4.6	396.3	4.2	437	33	396.3	4.2	0.6
13SAN05_57	215	5.76	1.687	0.031	0.1671	0.0025	0.68137	1004	12	996	14	1015	24	1015	24	1.9
13SAN05_58	329	1.43	3.396	0.069	0.2539	0.005	0.88663	1504	16	1458	26	1584	18	1584	18	8.0
13SAN05_59	419	1.568	1.588	0.019	0.1568	0.0019	0.71664	965.1	7.5	939	10	1021	18	1021	18	8.0

13SAN05_60	153.4	2.524	1.972	0.032	0.1908	0.0026	0.67241	1106	11	1125	14	1075	24	1075	24	4.7
13SAN05_62	67.4	1.088	1.47	0.032	0.1511	0.0021	0.3531	918	14	907	12	937	42	937	42	3.2
13SAN05_63	324.7	2.001	1.936	0.017	0.1854	0.0017	0.60037	1094.2	5.9	1096.3	9.1	1083	14	1083	14	1.2
13SAN05_64	224.5	0.805	12.52	0.15	0.4867	0.0052	0.84268	2644	12	2556	23	2714	11	2714	11	5.8
13SAN05_65	164.2	0.79	2.015	0.034	0.1949	0.002	0.53197	1120	12	1148	11	1056	30	1056	30	8.7
13SAN05_68	140	2.732	5.577	0.066	0.3458	0.0051	0.64172	1913	10	1917	25	1898	20	1898	20	1.0
13SAN05_69	855	4.5	1.925	0.031	0.1831	0.0036	0.80382	1089	11	1083	20	1079	24	1079	24	0.4
13SAN05_70	155.7	1.875	2.96	0.032	0.2418	0.003	0.65282	1397.9	8	1396	15	1393	21	1393	21	0.2
13SAN05_73	423	0.714	0.5045	0.0084	0.06597	0.00097	0.45239	414.4	5.7	411.8	5.8	437	35	411.8	5.8	0.6
13SAN05_74	410	4.018	4.458	0.065	0.3052	0.0058	0.7729	1722	12	1716	28	1741	22	1741	22	1.4
13SAN05_75	141.4	4.34	4	0.058	0.2808	0.0041	0.71941	1636	12	1597	21	1655	21	1655	21	3.5
13SAN05_76	584	4.003	4.562	0.089	0.3061	0.0068	0.8296	1740	16	1720	34	1749	25	1749	25	1.7
13SAN05_77	775	0.78	0.4592	0.0061	0.0596	0.00061	0.48705	383.5	4.3	373.2	3.7	457	28	373.2	3.7	2.7
13SAN05_79	87.4	1.093	2.149	0.031	0.1965	0.0025	0.31771	1165.3	9.7	1156	14	1171	31	1171	31	1.3
13SAN05_80	269	3.71	5.615	0.057	0.3422	0.0036	0.59695	1919.7	8.7	1897	17	1947	16	1947	16	2.6
13SAN05_81	105.7	1.237	2.479	0.038	0.2138	0.002	0.26576	1269	12	1249	11	1303	30	1303	30	4.1
13SAN05_82	40.6	1.72	14.55	0.25	0.5256	0.0092	0.62772	2784	16	2725	38	2844	25	2844	25	4.2
13SAN05_83	148	1.714	4.072	0.04	0.2921	0.0028	0.40332	1648	7.9	1652	14	1650	19	1650	19	0.1
13SAN05_84	201.2	2.92	6.064	0.089	0.3553	0.0053	0.80691	1984	13	1959	25	1999	17	1999	17	2.0
13SAN05_85	518	2.98	0.4727	0.0078	0.0617	0.001	0.62826	393.4	5.5	386	6.2	446	29	386	6.2	1.9
13SAN05_86	362	4.72	0.931	0.038	0.1037	0.0033	0.92107	665	20	636	19	738	42	636	19	4.4
13SAN05_87	238.9	1.685	0.52	0.012	0.0669	0.0012	0.6083	426.6	7.8	417.7	7.4	464	41	417.7	7.4	2.1
13SAN05_88	215.4	2.84	3.96	0.053	0.2849	0.0045	0.71059	1625	11	1615	23	1641	21	1641	21	1.6
13SAN05_89	347	1.829	2.478	0.044	0.2129	0.0043	0.74448	1264	13	1246	22	1267	27	1267	27	1.7
13SAN05_90	154.1	0.687	9.88	0.23	0.425	0.01	0.82907	2422	21	2279	46	2535	22	2535	22	10.1
13SAN05_91	432	77.3	0.559	0.015	0.0715	0.0015	0.4994	450.5	9.8	445.3	8.9	491	52	445.3	8.9	1.2
13SAN05_92	222	3.106	1.561	0.027	0.1587	0.0032	0.46706	955	11	949	18	963	41	963	41	1.5
13SAN05_93	510	1.472	0.5279	0.0087	0.06928	0.00079	0.49057	430.1	5.8	431.8	4.8	421	32	431.8	4.8	0.4
13SAN05_94	89.5	0.865	2.468	0.039	0.2118	0.0025	0.54625	1262	11	1238	13	1292	28	1292	28	4.2
13SAN05_95	104.5	1.09	2.799	0.066	0.2321	0.0058	0.66082	1355	17	1344	30	1380	35	1380	35	2.6

13SAN05_96	427.2	2.01	4.531	0.088	0.3072	0.0057	0.76441	1735	16	1726	28	1739	21	1739	21	0.7
13SAN05_97	237	0.578	0.4541	0.0098	0.06101	0.00093	0.4224	380.6	7	381.7	5.7	357	49	381.7	5.7	0.3
13SAN05_98	148.4	1.629	3.192	0.037	0.2552	0.0024	0.41061	1454.6	8.9	1465	12	1441	23	1441	23	1.7
13SAN05_99	870	2.119	0.534	0.011	0.06921	0.00072	0.66473	433.8	6.8	431.3	4.3	441	34	431.3	4.3	0.6
13SAN05_100	323	2.123	4.74	0.15	0.301	0.011	0.81552	1772	27	1696	54	1842	39	1842	39	7.9
13SAN05_102	96.7	0.838	1.68	0.044	0.1637	0.0041	0.68202	998	17	980	22	1014	46	1014	46	3.4
13SAN05_103	130.3	1.411	3.174	0.044	0.2489	0.0037	0.71781	1451	11	1432	19	1479	23	1479	23	3.2
13SAN05_104	133.1	1.533	3.98	0.049	0.2857	0.0031	0.57363	1629	10	1620	16	1641	19	1641	19	1.3
13SAN05_105	53	1.332	5.89	0.13	0.3477	0.0073	0.70769	1963	19	1922	35	1995	29	1995	29	3.7
13SAN05_106	339	1.64	0.549	0.012	0.0723	0.0015	0.52711	443.6	7.7	450	8.8	451	47	450	8.8	1.4
13SAN05_107	297	0.842	1.717	0.028	0.166	0.0031	0.75696	1017	11	990	17	1062	23	1062	23	6.8
13SAN05_108	189.6	4.09	5.614	0.065	0.3482	0.005	0.71154	1917	10	1925	24	1912	17	1912	17	0.7
13SAN05_109	74.4	2.095	1.597	0.035	0.1617	0.0024	0.23462	967	14	966	13	960	46	960	46	0.6
13SAN05_110	107.7	2.06	6.18	0.11	0.355	0.0076	0.78205	1999	16	1957	36	2018	26	2018	26	3.0
13SAN05_111	116.3	1.172	0.666	0.014	0.0813	0.0014	0.23999	519.7	8.7	503.9	8.1	578	51	503.9	8.1	3.0
13SAN05_112	129.7	0.675	4.003	0.062	0.2884	0.0055	0.57054	1635	13	1632	27	1644	31	1644	31	0.7
13SAN05_113	115	2.965	5.1	0.11	0.3077	0.0065	0.73197	1834	18	1728	32	1951	26	1951	26	11.4
13SAN05_115	220.8	3.624	2.1	0.028	0.191	0.003	0.58004	1148.1	9.2	1126	16	1189	24	1189	24	5.3
13SAN05_116	391	3.179	0.971	0.013	0.11	0.0012	0.42646	688.5	6.7	672.9	6.8	733	28	672.9	6.8	2.3
13SAN05_117	146	2.631	0.551	0.01	0.0724	0.0012	0.27013	446.3	6.6	450.4	7.1	433	50	450.4	7.1	0.9
13SAN05_118	50.3	3.542	2.072	0.042	0.1896	0.0037	0.48672	1138	14	1119	20	1192	37	1192	37	6.1
13SAN05_119	821	7.87	0.87	0.03	0.0901	0.0028	0.91557	635	16	556	17	922	34	556	17	12.4
13SAN05_120	512	2.389	4.512	0.063	0.303	0.0048	0.85427	1732	12	1706	23	1770	16	1770	16	3.6

Table 2a: Canyon Range and Pavant Thrust Sheets: Canyon Mountains

Sample Name:								207/235		206/238		206/207		Best age		
Grain #	[U] ppm	U/Th	207/235	2σ error	206/238	2σ error	RHO	Age Ma	2σ error	Age (Ma)	2σ error	Age (Ma)	2σ error	(Ma)	2σ error	% Discordance*
11UPC01_1	217	1.518	4.842	0.031	0.3211	0.0023	0.65591	1792	5.3	1795	11	1787.7	5.4	1787.7	5.4	0.4
11UPC01_2	340	5.09	5.038	0.058	0.3370	0.0040	0.9366	1824.8	9.9	1872	19	1770.2	5.9	1770.2	5.9	5.8
11UPC01_3	518.3	1.508	4.146	0.040	0.2746	0.0026	0.547	1663.2	7.9	1564	13	1787.5	8.8	1787.5	8.8	12.5
11UPC01_4	128.4	0.665	4.886	0.039	0.3248	0.0025	0.76229	1801.3	7	1813	12	1788.6	5.7	1788.6	5.7	1.4
11UPC01_5	272.5	4.05	4.921	0.030	0.3231	0.0026	0.48703	1805.6	5.1	1805	13	1815	8.6	1815	8.6	0.6
11UPC01_6	220	1.674	5.145	0.058	0.3355	0.0051	0.81554	1843.3	9.6	1865	25	1819	11	1819	11	2.5
11UPC01_7	309	3	5.113	0.054	0.3423	0.0037	0.69423	1837.9	8.9	1897	18	1775.8	9.1	1775.8	9.1	6.8
11UPC01_7	191.6	1.826	5.330	0.046	0.3538	0.0048	0.6349	1877.7	7	1952	23	1783.3	8.7	1783.3	8.7	9.5
11UPC01_10	297	3.88	4.834	0.067	0.3221	0.0042	0.79504	1791	12	1800	21	1798	13	1798	13	0.1
11UPC01_10	131.5	1.627	5.281	0.037	0.3527	0.0035	0.58764	1865.6	5.9	1947	17	1779	8.5	1779	8.5	9.4
11UPC01_11	403	1.05	5.090	0.061	0.3261	0.0038	0.79925	1834	10	1819	18	1859	11	1859	11	2.2
11UPC01_12	99.9	1.849	4.780	0.035	0.3305	0.0029	0.60848	1781.2	6.1	1840	14	1715.9	7.2	1715.9	7.2	7.2
11UPC01_13	157.4	1	4.854	0.030	0.3242	0.0026	0.5868	1795.5	5.5	1810	12	1779.8	8.6	1779.8	8.6	1.7
11UPC01_14	284.7	2.68	5.240	0.035	0.3476	0.0029	0.57387	1859.1	5.6	1923	14	1788	5.6	1788	5.6	7.6
11UPC01_15	145	2.25	4.733	0.040	0.3281	0.0028	0.67534	1774.3	7.2	1829	14	1711.8	7.4	1711.8	7.4	6.8
11UPC01_16	246	5.28	4.522	0.051	0.3084	0.0041	0.7205	1737.1	8.4	1733	20	1730	11	1730	11	0.2
11UPC01_17	245	4.05	5.011	0.056	0.3329	0.0044	0.5766	1820.9	9.4	1852	21	1782.5	9	1782.5	9	3.9
11UPC01_18	97.8	0.522	4.842	0.039	0.3240	0.0024	0.55852	1792.8	6.7	1811	11	1773.9	9.2	1773.9	9.2	2.1
11UPC01_19	35.2	1.369	4.289	0.041	0.3030	0.0030	0.48126	1690.6	7.8	1708	15	1677	10	1677	10	1.8
11UPC01_20	480	5.9	4.766	0.065	0.3156	0.0047	0.79728	1779	11	1768	23	1793	10	1793	10	1.4
11UPC01_20	212	1.755	5.048	0.062	0.3374	0.0039	0.77864	1827	10	1874	19	1779	11	1779	11	5.3
11UPC01_21	232.7	1.228	4.920	0.041	0.3268	0.0026	0.69509	1806.3	6.9	1823	13	1783.3	6.5	1783.3	6.5	2.2
11UPC01_22	271	0.829	5.026	0.038	0.3337	0.0028	0.76523	1823.6	6.4	1856	13	1793.8	5.7	1793.8	5.7	3.5
11UPC01_23	92.9	1.176	3.324	0.026	0.2661	0.0019	0.29357	1486.3	6.1	1521.1	9.5	1436.1	9	1436.1	9	5.9
11UPC01_24	157.8	10.46	5.120	0.036	0.3400	0.0026	0.68046	1839.1	6.1	1886	13	1778.2	6.5	1778.2	6.5	6.1

11UPC01_25	78.9	1.834	3.268	0.028	0.2606	0.0019	0.63059	1473	6.7	1492.9	9.6	1441.3	8.9	1441.3	8.9	3.6
11UPC01_26	51.5	1.422	4.865	0.076	0.3125	0.0049	0.18491	1795	13	1753	24	1849	25	1849	25	5.2
11UPC01_27	209.9	2.689	4.013	0.047	0.2709	0.0033	0.69813	1636.5	9.6	1545	17	1760	11	1760	11	12.2
11UPC01_27	187.6	1.947	4.762	0.035	0.3136	0.0034	0.63071	1778	6.2	1758	17	1791.5	8.9	1791.5	8.9	1.9
11UPC01_28	70.2	3.4	5.485	0.039	0.3523	0.0029	0.6218	1898.7	6.3	1945	14	1845.6	7.1	1845.6	7.1	5.4
11UPC01_30	136.4	1.492	5.020	0.036	0.3339	0.0026	0.66393	1823.2	6.2	1857	13	1786.7	6.6	1786.7	6.6	3.9
11UPC01_31	97.8	1.455	1.926	0.018	0.1862	0.0016	0.35673	1089.8	6.2	1100.8	8.8	1070	11	1100.8	8.8	1.0
11UPC01_32	230	2.31	4.686	0.042	0.3135	0.0027	0.71126	1764.4	7.6	1758	13	1776.9	7.6	1776.9	7.6	1.1
11UPC01_33	183.3	1.135	4.846	0.049	0.3261	0.0031	0.63135	1792.6	8.5	1819	15	1764	11	1764	11	3.1
11UPC01_34	663	6.96	4.451	0.053	0.2973	0.0035	0.80857	1721.5	9.8	1678	17	1776.7	8	1776.7	8	5.6
11UPC01_34	478	5.32	4.781	0.047	0.3161	0.0039	0.8004	1781.2	8.2	1770	19	1792	7.1	1792	7.1	1.2
11UPC01_35	468	9.97	4.872	0.082	0.3234	0.0049	0.86921	1799	14	1806	24	1792	9.9	1792	9.9	0.8
11UPC01_37	400	2.38	6.766	0.082	0.3841	0.0057	0.65683	2081	11	2095	26	2067	14	2067	14	1.4
11UPC01_37	289	0.416	11.690	0.130	0.5060	0.0055	0.56789	2580	11	2639	24	2531	12	2531	12	4.3
11UPC01_38	139.7	1.635	3.253	0.025	0.2620	0.0023	0.61789	1471.1	6	1500	12	1425.8	7.9	1425.8	7.9	5.2
11UPC01_39	207.4	1.666	5.250	0.035	0.3509	0.0029	0.78453	1860.6	5.6	1938	14	1777.6	4.9	1777.6	4.9	9.0
11UPC01_40	135.2	2.395	5.167	0.044	0.3468	0.0031	0.75476	1846.9	7.3	1919	15	1769.9	6	1769.9	6	8.4
11UPC01_41	107.4	1.084	3.239	0.021	0.2592	0.0018	0.56875	1467	4.8	1485.5	9.2	1436.5	7	1436.5	7	3.4
11UPC01_43	220	2.05	3.247	0.046	0.2619	0.0038	0.82798	1471	11	1499	19	1433	11	1433	11	4.6
11UPC01_44	122.5	1.954	3.258	0.024	0.2613	0.0019	0.74153	1472.3	6	1499	10	1426.7	6.8	1426.7	6.8	5.1
11UPC01_45	44.1	2.571	4.949	0.047	0.3359	0.0036	0.51188	1810.1	8.1	1867	17	1745.1	9	1745.1	9	7.0
11UPC01_47	439	4.68	4.750	0.035	0.3160	0.0031	0.61723	1776	6.2	1770	15	1790	8.3	1790	8.3	1.1
11UPC01_48	355	3.36	5.362	0.045	0.3516	0.0029	0.6985	1878.4	7.2	1942	14	1811.9	6.6	1811.9	6.6	7.2
11UPC01_49	287.8	2.38	4.816	0.055	0.3184	0.0040	0.701	1787.4	9.5	1782	20	1800	11	1800	11	1.0
11UPC01_50	322	5.3	4.660	0.061	0.3131	0.0053	0.83919	1761	11	1755	26	1767.1	8.6	1767.1	8.6	0.7
11UPC01_51	346	1.35	4.760	0.039	0.3164	0.0039	0.63234	1779.1	6.6	1772	19	1785	12	1785	12	0.7
11UPC01_52	606	7.49	4.740	0.074	0.3146	0.0046	0.81935	1773	13	1763	23	1798	12	1798	12	1.9
11UPC01_53	362	6.35	5.155	0.078	0.3248	0.0037	0.82503	1844	13	1813	18	1872	13	1872	13	3.2
11UPC01_54	438	12.5	4.866	0.055	0.3220	0.0042	0.82645	1796	9.5	1799	21	1793.7	9.7	1793.7	9.7	0.3
11UPC01_54	370	1.741	5.675	0.051	0.3614	0.0038	0.89384	1927.2	7.7	1989	18	1856.6	7.8	1856.6	7.8	7.1

11UPC01_55	535	1.25	4.938	0.069	0.3257	0.0055	0.77095	1808	12	1817	27	1797	13	1797	13	1.1
11UPC01_56	351	5.19	4.922	0.044	0.3227	0.0030	0.86137	1805.6	7.6	1803	15	1797.8	5	1797.8	5	0.3
11UPC01_57	287.8	4.14	4.983	0.041	0.3322	0.0028	0.74023	1818.2	6.5	1849	14	1779.1	7	1779.1	7	3.9
11UPC01_59	170.8	0.4993	3.296	0.026	0.2651	0.0022	0.82846	1479.8	6.2	1517	11	1430.4	6.8	1430.4	6.8	6.1
11UPC01_60	413	5.28	4.921	0.064	0.3263	0.0049	0.78976	1805	11	1820	24	1785.8	7.8	1785.8	7.8	1.9
11UPC01_61	152	2.04	4.721	0.035	0.3232	0.0033	0.51506	1771.7	6.3	1805	16	1720	11	1720	11	4.9
11UPC01_62	530	4.53	4.590	0.110	0.3075	0.0089	0.86167	1747	19	1728	44	1773	13	1773	13	2.5
11UPC01_64	122.3	0.5378	4.760	0.036	0.3157	0.0031	0.6146	1777.5	6.3	1768	15	1785.9	8	1785.9	8	1.0
11UPC01_66	67.8	1.303	1.791	0.028	0.1719	0.0024	0.53166	1043.4	9.9	1022	13	1077	15	1022	13	2.1
11UPC01_66	46	1.302	1.874	0.032	0.1888	0.0026	0.43319	1071	11	1115	14	1004	23	1115	14	4.1
11UPC01_67	271	1.518	5.382	0.079	0.3163	0.0051	0.9028	1881	12	1771	25	2012.1	9.6	2012.1	9.6	12.0
11UPC01_68	205	2.98	4.898	0.045	0.3262	0.0032	0.44622	1802.9	8.1	1820	16	1783.7	9.6	1783.7	9.6	2.0
11UPC01_69	112.7	3.073	4.594	0.033	0.3177	0.0027	0.53408	1749.3	6.2	1778	13	1708	10	1708	10	4.1
11UPC01_70	218	3.072	4.708	0.042	0.3075	0.0033	0.65826	1768.3	7.5	1728	16	1814	9.7	1814	9.7	4.7
11UPC01_71	271.5	3.105	4.446	0.040	0.2930	0.0028	0.74414	1720.6	7.4	1657	14	1789.7	7.9	1789.7	7.9	7.4
11UPC01_73	259	1.653	4.810	0.039	0.3194	0.0026	0.63913	1787.2	7	1787	13	1782.2	8.6	1782.2	8.6	0.3
11UPC01_74	263	3.61	4.790	0.044	0.3184	0.0035	0.79439	1782.6	7.7	1784	17	1780.5	7.8	1780.5	7.8	0.2
11UPC01_75	69.6	1.468	4.631	0.046	0.3213	0.0029	0.57714	1754.2	8.3	1798	14	1699.9	9	1699.9	9	5.8
11UPC01_76	484	6.59	5.060	0.099	0.3319	0.0072	0.84527	1829	16	1847	35	1794	16	1794	16	3.0
11UPC01_77	76.5	324	4.649	0.045	0.3190	0.0040	0.62249	1757.6	8.2	1784	19	1723	10	1723	10	3.5
11UPC01_79	56.5	0.4567	4.663	0.041	0.3100	0.0032	0.67725	1760.2	7.3	1740	16	1770.1	8.7	1770.1	8.7	1.7
11UPC01_80	314.4	12.7	4.968	0.056	0.3301	0.0049	0.82684	1813.5	9.6	1838	24	1786	10	1786	10	2.9
11UPC01_81	690	32.2	3.808	0.033	0.2593	0.0029	0.68087	1594.2	7	1486	15	1746.5	8.8	1746.5	8.8	14.9
11UPC01_82	156	1.158	4.981	0.056	0.3335	0.0030	0.74699	1815.3	9.4	1855	15	1773.9	8.4	1773.9	8.4	4.6
11UPC01_83	368	0.914	4.882	0.052	0.3227	0.0040	0.80872	1800.5	8.4	1803	19	1795	11	1795	11	0.4
11UPC01_84	466	2.21	4.574	0.059	0.3037	0.0041	0.70114	1744	11	1710	20	1787	14	1787	14	4.3
11UPC01_85	113.9	1.362	5.037	0.038	0.3398	0.0034	0.42423	1825.3	6.4	1886	16	1766	11	1766	11	6.8
11UPC01_86	316	1.46	4.721	0.037	0.3145	0.0026	0.66696	1771.8	6.8	1763	13	1789.3	6.9	1789.3	6.9	1.5
11UPC01_87	349	1.91	5.215	0.043	0.3458	0.0031	0.88671	1854.7	7	1914	15	1786.2	5.8	1786.2	5.8	7.2
11UPC01_88	410	4.89	5.122	0.049	0.3413	0.0038	0.7138	1839.4	8.1	1892	18	1789.6	8	1789.6	8	5.7

11UPC01_89	297	6.21	4.966	0.041	0.3296	0.0031	0.79313	1813.1	6.9	1836	15	1788.6	5.7	1788.6	5.7	2.7
11UPC01_90	208.2	1.93	4.068	0.041	0.2730	0.0028	0.79775	1647.2	8.3	1556	14	1763.4	9.7	1763.4	9.7	11.8
11UPC01_91	382.5	6.72	5.283	0.047	0.3402	0.0027	0.71638	1865.7	7.6	1888	13	1836.5	7	1836.5	7	2.8
11UPC01_92	173.4	2.32	4.958	0.050	0.3292	0.0037	0.67108	1811.8	8.6	1834	18	1781.7	9	1781.7	9	2.9
11UPC01_94	192	0.934	4.802	0.056	0.3196	0.0040	0.77135	1784.5	9.7	1787	19	1779.5	7.2	1779.5	7.2	0.4
11UPC01_95	275	2.03	4.840	0.030	0.3192	0.0023	0.6831	1791.6	5.2	1786	11	1793.4	5.4	1793.4	5.4	0.4
11UPC01_96	199.2	2.671	5.167	0.036	0.3441	0.0030	0.79596	1847.6	6	1906	14	1782.4	5.9	1782.4	5.9	6.9
11UPC01_98	192.1	2.334	4.366	0.039	0.2999	0.0030	0.75373	1705.4	7.4	1691	15	1727.4	6.8	1727.4	6.8	2.1
11UPC01_99	283.4	2.513	4.603	0.042	0.3169	0.0033	0.66597	1749.4	7.6	1777	17	1720	11	1720	11	3.3
11UPC01_100	92.9	0.7576	5.644	0.036	0.3639	0.0031	0.47941	1922.6	5.5	2000	15	1841.1	8.3	1841.1	8.3	8.6
11UPC01_101	541	6.05	4.728	0.057	0.3167	0.0049	0.7865	1772	10	1773	24	1785	11	1785	11	0.7
11UPC01_102	298	3.961	5.266	0.038	0.3409	0.0029	0.73574	1863.8	6.3	1891	14	1826.4	5.3	1826.4	5.3	3.5
11UPC01_103	175.8	1.546	4.954	0.051	0.3168	0.0041	0.68429	1811.1	8.6	1774	20	1839.4	9.7	1839.4	9.7	3.6
11UPC01_104	181	1.277	5.085	0.044	0.3373	0.0032	0.76945	1833.3	7.4	1873	16	1787.5	6.3	1787.5	6.3	4.8
11UPC01_105	303.7	1.881	8.770	0.120	0.4194	0.0052	0.86346	2313	13	2257	23	2362	12	2362	12	4.4
11UPC01_106	267.2	1.365	3.345	0.030	0.2673	0.0018	0.7005	1491.3	6.9	1526.7	9	1438.4	7.4	1438.4	7.4	6.1
11UPC01_107	282	2.21	5.009	0.036	0.3298	0.0030	0.90311	1817.3	7.4	1837	15	1793.1	7.4	1793.1	7.4	2.4
11UPC01_108	158	1.92	5.915	0.056	0.3662	0.0036	0.6403	1962.8	8.3	2011	17	1908.8	9.3	1908.8	9.3	5.4
11UPC01_109	208	1.19	5.132	0.034	0.3405	0.0028	0.62092	1841.2	5.6	1889	13	1788.3	6.5	1788.3	6.5	5.6
11UPC01_110	276	2.92	4.763	0.038	0.3172	0.0024	0.63069	1778	6.7	1776	12	1777.4	6.8	1777.4	6.8	0.1
11UPC01_111	306.2	3.64	5.385	0.070	0.3371	0.0039	0.66162	1883	11	1873	19	1887	14	1887	14	0.7
11UPC01_112	205	0.659	5.048	0.041	0.3369	0.0029	0.75637	1827	6.8	1871	14	1780.2	6	1780.2	6	5.1
11UPC01_113	78	2.527	4.591	0.046	0.3132	0.0036	0.71275	1748	8.1	1758	18	1741.3	9.3	1741.3	9.3	1.0
11UPC01_114	484	2.87	4.515	0.069	0.3008	0.0051	0.73769	1733	13	1695	25	1791	17	1791	17	5.4
11UPC01_114	198.2	0.925	5.076	0.046	0.3388	0.0029	0.65747	1831.8	7.7	1881	14	1779.3	6.8	1779.3	6.8	5.7
11UPC01_115	233.3	1.566	1.825	0.016	0.1778	0.0012	0.49629	1054	5.7	1055	6.5	1038	10	1055	6.5	0.1
11UPC01_117	102	1.896	4.504	0.039	0.3167	0.0028	0.67678	1731.2	7.3	1773	14	1684.1	8	1684.1	8	5.3
11UPC01_118	179.9	1.688	5.206	0.041	0.3414	0.0033	0.51847	1853.2	6.8	1893	16	1807	11	1807	11	4.8
11UPC01_119	192	1.866	3.247	0.031	0.2602	0.0025	0.6072	1469.2	7.3	1491	13	1436.9	9.7	1436.9	9.7	3.8
11UPC01_120	413	1.218	5.009	0.066	0.3336	0.0038	0.88836	1820	11	1855	19	1788.5	8.9	1788.5	8.9	3.7

11UPC01_120	223	0.913	5.241	0.048	0.3475	0.0033	0.69438	1859	7.8	1923	16	1788.1	7.9	1788.1	7.9	7.5
11UPC02_1	191	2.03	1.815	0.024	0.1676	0.0034	0.63055	1050.0	8.5	999.0	19.0	1130	26	999.0	19.0	4.9
11UPC02_2	189	1.17	3.086	0.051	0.2468	0.0050	0.92446	1428.0	13.0	1421.0	26.0	1429	12	1429.0	12.0	0.6
11UPC02_3	141	2.00	4.547	0.041	0.3059	0.0028	0.66617	1739.1	7.5	1720.0	14.0	1761	8	1761.0	7.9	2.3
11UPC02_4	109.7	2.23	3.957	0.030	0.2769	0.0021	0.60291	1625.0	6.1	1576.0	11.0	1682	8	1681.9	7.9	6.3
11UPC02_5	197.2	2.17	4.205	0.027	0.2925	0.0016	0.61826	1674.7	5.2	1653.7	8.1	1698	7	1698.2	7.2	2.6
11UPC02_6	283	2.58	3.952	0.051	0.2769	0.0033	0.89257	1623.0	10.0	1575.0	17.0	1681	6	1680.5	6.2	6.3
11UPC02_7	54.77	1.21	1.885	0.025	0.1779	0.0019	0.65696	1075.2	8.7	1056.0	10.0	1114	13	1056.0	10.0	1.8
11UPC02_8	55.3	0.69	2.861	0.031	0.2334	0.0024	0.50904	1371.2	8.1	1352.0	13.0	1404	12	1404.0	12.0	3.7
11UPC02_9	95.4	0.89	2.213	0.024	0.1975	0.0014	0.39029	1184.6	7.4	1161.8	7.7	1224	15	1161.8	7.7	1.9
11UPC02_10	39.1	3.22	2.439	0.042	0.1744	0.0031	0.51323	1253.0	13.0	1036.0	17.0	1661	17	1036.0	17.0	17.3
11UPC02_11	165	1.44	2.863	0.028	0.2307	0.0023	0.94280	1371.8	7.4	1338.0	12.0	1422	8	1421.6	7.8	5.9
11UPC02_12	122	1.94	2.503	0.036	0.2018	0.0020	0.83762	1272.0	11.0	1185.0	11.0	1426	11	1185.0	11.0	6.8
11UPC02_13	283	1.66	2.354	0.024	0.1877	0.0019	0.79119	1228.4	7.2	1109.0	10.0	1441	10	1109.0	10.0	9.7
11UPC02_14	209	1.41	2.165	0.058	0.1734	0.0048	0.95027	1169.0	18.0	1029.0	27.0	1421	10	1029.0	27.0	12.0
11UPC02_15	111.2	1.49	2.334	0.031	0.2093	0.0038	0.55608	1221.9	9.5	1224.0	20.0	1236	20	1236.0	20.0	1.0
11UPC02_16	364	0.86	1.673	0.061	0.1500	0.0054	0.98526	993.0	24.0	900.0	30.0	1224	9	900.0	30.0	9.4
11UPC02_17	63.3	2.81	1.691	0.022	0.1621	0.0019	0.29865	1004.4	8.1	968.0	11.0	1102	18	968.0	11.0	3.6
11UPC02_18	150.3	1.43	3.559	0.035	0.2492	0.0025	0.67602	1539.8	7.8	1436.0	13.0	1683	10	1683.0	10.0	14.7
11UPC02_19	35.4	1.38	1.288	0.031	0.1203	0.0023	0.42225	839.0	14.0	732.0	13.0	1130	26	732.0	13.0	12.8
11UPC02_20	18.8	1.89	1.610	0.042	0.1481	0.0021	0.46606	976.0	16.0	892.0	12.0	1190	34	892.0	12.0	8.6
11UPC02_22	186.5	1.29	2.771	0.039	0.1939	0.0038	0.79476	1347.0	11.0	1146.0	21.0	1686	12	1146.0	21.0	14.9
11UPC02_23	139.7	1.39	2.778	0.037	0.2147	0.0028	0.73531	1348.8	9.9	1253.0	15.0	1518	11	1518.0	11.0	17.5
11UPC02_24	168	1.00	2.818	0.027	0.2264	0.0021	0.90050	1359.9	7.1	1315.0	11.0	1440	7	1440.4	7.2	8.7
11UPC02_25	226	1.96	3.570	0.074	0.2432	0.0044	0.87544	1545.0	16.0	1402.0	23.0	1757	14	1757.0	14.0	20.2
11UPC02_26	154	1.04	3.973	0.058	0.2731	0.0038	0.69572	1629.0	12.0	1556.0	19.0	1712	14	1712.0	14.0	9.1
11UPC02_27	135	1.30	2.865	0.025	0.2316	0.0022	0.52036	1372.3	6.7	1343.0	11.0	1436	9	1435.7	9.3	6.5
11UPC02_28	187	1.10	2.885	0.023	0.2325	0.0019	0.64492	1378.4	5.8	1347.2	9.8	1440	8	1439.6	8.2	6.4

11UPC02_29	332	1.35	3.340	0.050	0.2403	0.0035	0.79924	1490.0	12.0	1388.0	18.0	1660	12	1660.0	12.0	16.4
11UPC02_30	46	0.96	1.812	0.021	0.1709	0.0019	0.26257	1049.1	7.7	1017.0	10.0	1134	18	1017.0	10.0	3.1
11UPC02_31	55	1.98	1.801	0.036	0.1764	0.0035	0.64045	1044.0	13.0	1047.0	19.0	1062	26	1047.0	19.0	0.3
11UPC02_32	262	1.59	3.270	0.120	0.2258	0.0087	0.96024	1476.0	27.0	1309.0	46.0	1726	12	1726.0	12.0	24.2
11UPC02_33	145.3	1.16	2.013	0.021	0.1796	0.0019	0.72515	1119.5	7.1	1065.0	11.0	1246	9	1065.0	11.0	4.9
11UPC02_34	147	0.54	3.196	0.099	0.2330	0.0052	0.86598	1454.0	24.0	1349.0	28.0	1621	29	1621.0	29.0	16.8
11UPC02_35	109.4	1.88	1.956	0.028	0.1752	0.0030	0.71549	1101.0	9.5	1042.0	17.0	1228	16	1042.0	17.0	5.4
11UPC02_36	157	2.15	4.117	0.035	0.2831	0.0022	0.10888	1657.2	6.9	1607.0	11.0	1730	13	1730.0	13.0	7.1
11UPC02_37	43.2	1.35	1.423	0.029	0.1335	0.0024	0.58525	900.0	12.0	807.0	13.0	1176	21	807.0	13.0	10.3
11UPC02_38	266	1.51	3.714	0.070	0.2653	0.0045	0.94600	1572.0	16.0	1516.0	23.0	1658	8	1657.5	7.5	8.5
11UPC02_39	82.7	1.04	3.700	0.037	0.2653	0.0029	0.62126	1571.9	8.1	1516.0	15.0	1655	9	1655.2	8.7	8.4
11UPC02_40	147	1.69	4.087	0.037	0.2840	0.0035	0.77506	1652.4	7.6	1611.0	18.0	1705	10	1705.0	10.0	5.5
11UPC02_41	333	5.30	4.780	0.170	0.3090	0.0100	0.94744	1773.0	30.0	1730.0	50.0	1851	16	1851.0	16.0	6.5
11UPC02_42	113	1.21	2.862	0.021	0.2285	0.0017	0.19193	1371.8	5.4	1326.6	9.1	1450	9	1449.8	9.3	8.5
11UPC02_43	383	1.99	4.022	0.085	0.2715	0.0057	0.96121	1638.0	17.0	1551.0	28.0	1771	6	1771.3	6.4	12.4
11UPC02_44	299	1.48	4.534	0.086	0.3070	0.0057	0.99355	1735.0	17.0	1725.0	28.0	1755	6	1754.9	5.5	1.7
11UPC02_45	71.5	0.95	1.769	0.022	0.1662	0.0019	0.64202	1033.4	8.2	991.0	10.0	1139	11	991.0	10.0	4.1
11UPC02_46	322	3.43	4.071	0.057	0.2737	0.0031	0.78934	1648.0	11.0	1560.0	16.0	1773	8	1773.4	7.7	12.0
11UPC02_47	338	1.25	3.536	0.057	0.2464	0.0048	0.87433	1534.0	13.0	1419.0	25.0	1706	18	1706.0	18.0	16.8
11UPC02_48	469	1.60	2.363	0.041	0.1922	0.0039	0.95886	1231.0	12.0	1133.0	21.0	1426	10	1133.0	21.0	8.0
11UPC02_49	187	1.63	3.029	0.022	0.2423	0.0020	0.68955	1415.5	5.5	1398.0	10.0	1436	8	1435.9	7.5	2.6
11UPC02_50	84.5	1.22	1.886	0.020	0.1784	0.0013	0.37422	1075.6	6.9	1058.1	7.3	1114	13	1058.1	7.3	1.6
11UPC02_51	61.3	0.74	2.162	0.031	0.1963	0.0023	0.50591	1169.0	10.0	1155.0	13.0	1211	16	1155.0	13.0	1.2
11UPC02_52	157.9	1.65	4.360	0.037	0.2949	0.0027	0.68958	1704.4	7.0	1666.0	13.0	1763	8	1762.7	7.5	5.5
11UPC02_53	148.9	1.23	0.646	0.011	0.0794	0.0010	0.33007	505.7	6.5	492.5	6.1	581	25	492.5	6.1	2.6
11UPC02_54	508	4.55	2.797	0.085	0.2267	0.0053	0.99278	1351.0	26.0	1317.0	28.0	1439	11	1439.0	11.0	8.5
11UPC02_55	50.7	1.39	1.598	0.026	0.1489	0.0025	0.47924	970.0	10.0	895.0	14.0	1170	20	895.0	14.0	7.7
11UPC02_56	142	1.04	2.981	0.027	0.2383	0.0020	0.55728	1403.3	7.1	1378.0	10.0	1454	10	1454.0	10.0	5.2
11UPC02_57	245	1.25	3.640	0.061	0.2565	0.0042	0.85868	1558.0	13.0	1471.0	22.0	1683	10	1683.2	9.6	12.6
11UPC02_58	57.8	2.03	1.734	0.026	0.1674	0.0025	0.35067	1020.2	9.7	997.0	14.0	1086	19	997.0	14.0	2.3

11UPC02_59	262	1.93	2.980	0.040	0.2401	0.0032	0.93654	1400.0	13.0	1387.0	17.0	1431	7	1430.6	7.4	3.0
11UPC02_60	171.8	1.43	14.220	0.100	0.5272	0.0055	0.77130	2763.9	6.9	2729.0	23.0	2784	6	2783.9	5.9	2.0
11UPC02_62	57.4	1.23	2.906	0.031	0.2299	0.0025	0.35700	1383.0	7.9	1334.0	13.0	1459	15	1459.0	15.0	8.6
11UPC02_63	192	1.37	11.990	0.270	0.4785	0.0099	0.81275	2605.0	21.0	2520.0	43.0	2671	16	2671.0	16.0	5.7
11UPC02_64	64.2	1.17	2.126	0.029	0.1896	0.0021	0.39218	1156.4	9.5	1122.0	11.0	1225	16	1122.0	11.0	3.0
11UPC02_65	127.4	0.79	1.964	0.018	0.1864	0.0015	0.35590	1103.8	6.2	1101.8	8.1	1120	11	1101.8	8.1	0.2
11UPC02_66	79.3	1.09	1.785	0.025	0.1716	0.0026	0.49639	1039.3	9.0	1020.0	14.0	1086	15	1020.0	14.0	1.9
11UPC02_67	77.9	0.89	4.132	0.040	0.2896	0.0034	0.42714	1660.3	8.0	1639.0	17.0	1690	14	1690.0	14.0	3.0
11UPC02_68	99	2.34	1.939	0.021	0.1840	0.0018	0.43501	1094.1	7.3	1090.0	10.0	1113	12	1090.0	10.0	0.4
11UPC02_69	236	1.09	4.096	0.041	0.2916	0.0034	0.66938	1653.7	8.4	1649.0	17.0	1658	11	1658.0	11.0	0.5
11UPC02_70	247	2.71	4.280	0.037	0.2975	0.0025	0.64608	1689.1	7.1	1679.0	12.0	1707	9	1707.0	8.7	1.6
11UPC02_71	142	1.31	3.135	0.033	0.2521	0.0024	0.66507	1441.6	8.0	1449.0	12.0	1436	10	1436.1	9.9	0.9
11UPC02_72	27.4	1.03	1.834	0.032	0.1684	0.0024	0.31237	1056.0	11.0	1003.0	13.0	1157	22	1003.0	13.0	5.0
11UPC02_73	51	0.61	4.453	0.057	0.3004	0.0038	0.60329	1723.0	10.0	1693.0	19.0	1769	13	1769.0	13.0	4.3
11UPC02_74	200	1.52	3.358	0.032	0.2340	0.0029	0.72122	1494.2	7.5	1355.0	15.0	1684	10	1683.6	9.9	19.5
11UPC02_75	80.5	1.28	1.894	0.021	0.1792	0.0018	0.52788	1078.6	7.5	1062.7	9.6	1125	14	1062.7	9.6	1.5
11UPC02_76	169	0.78	2.241	0.040	0.1840	0.0033	0.75889	1195.0	13.0	1089.0	18.0	1395	14	1089.0	18.0	8.9
11UPC02_77	224	1.33	4.043	0.052	0.2796	0.0044	0.80719	1642.0	11.0	1589.0	22.0	1704	10	1704.0	10.0	6.7
11UPC02_78	14.83	1.71	1.362	0.041	0.1293	0.0030	0.02170	870.0	18.0	784.0	17.0	1130	48	784.0	17.0	9.9
11UPC02_79	51.8	1.99	4.271	0.046	0.2976	0.0023	0.12278	1687.0	8.8	1679.0	12.0	1698	11	1698.0	11.0	1.1
11UPC02_80	427	3.60	3.700	0.064	0.2599	0.0050	0.86570	1573.0	14.0	1489.0	26.0	1683	8	1682.9	8.4	11.5
11UPC02_81	71.4	1.25	1.928	0.027	0.1730	0.0019	0.41276	1090.1	9.2	1028.0	10.0	1220	15	1028.0	10.0	5.7
11UPC02_82	117.4	1.31	4.102	0.044	0.2888	0.0030	0.82217	1654.3	8.7	1635.0	15.0	1680	7	1679.7	6.6	2.7
11UPC02_83	21.5	1.04	1.697	0.042	0.1588	0.0027	0.06200	1008.0	15.0	951.0	15.0	1159	27	951.0	15.0	5.7
11UPC02_84	29.1	1.06	1.639	0.033	0.1540	0.0023	0.70353	984.0	13.0	923.0	13.0	1107	18	923.0	13.0	6.2
11UPC02_85	56.9	0.82	1.872	0.021	0.1761	0.0017	0.14716	1070.8	7.3	1045.4	9.5	1134	18	1045.4	9.5	2.4
11UPC02_86	363	2.91	4.067	0.053	0.2712	0.0040	0.85311	1647.0	11.0	1546.0	20.0	1778	7	1777.5	7.4	13.0
11UPC02_87	78.1	1.38	2.195	0.019	0.2017	0.0017	0.10146	1179.2	5.9	1184.1	9.1	1184	13	1184.1	9.1	0.4
11UPC02_88	280	1.66	2.121	0.019	0.1876	0.0019	0.74785	1155.2	6.2	1108.0	10.0	1246	7	1108.0	10.0	4.1
11UPC02_89	30.8	0.76	2.018	0.028	0.1841	0.0021	0.27825	1120.6	9.5	1089.0	11.0	1200	20	1089.0	11.0	2.8

11UPC02_90	226	1.59	1.835	0.022	0.1777	0.0021	0.96857	1057.6	8.1	1054.0	12.0	1068	9	1054.0	12.0	0.3
11UPC02_91	25.1	0.49	2.487	0.040	0.1994	0.0034	0.37578	1269.0	11.0	1172.0	18.0	1453	24	1172.0	18.0	7.6
11UPC02_92	118.2	1.21	1.820	0.020	0.1735	0.0018	0.43089	1052.2	7.2	1031.0	10.0	1090	11	1031.0	10.0	2.0
11UPC02_93	40.3	1.01	23.990	0.180	0.6347	0.0046	0.68146	3267.6	7.3	3170.0	18.0	3324	6	3323.9	6.1	4.6
11UPC02_94	32.7	1.00	1.732	0.029	0.1628	0.0022	0.19435	1019.0	11.0	972.0	12.0	1111	21	972.0	12.0	4.6
11UPC02_95	165	1.01	4.575	0.040	0.3067	0.0029	0.63617	1744.2	7.4	1726.0	14.0	1767	9	1767.0	8.7	2.3
11UPC02_96	93.5	0.98	4.027	0.030	0.2877	0.0020	0.29759	1639.4	6.1	1630.0	10.0	1655	11	1655.0	11.0	1.5
11UPC02_97	243	0.86	2.549	0.060	0.1898	0.0053	0.53220	1284.0	17.0	1119.0	28.0	1587	44	1119.0	28.0	12.9
11UPC02_98	301.4	1.13	3.869	0.042	0.2661	0.0029	0.65596	1606.8	8.7	1521.0	15.0	1722	10	1722.0	10.0	11.7
11UPC02_99	136.7	2.25	4.134	0.051	0.2871	0.0039	0.66964	1660.0	10.0	1629.0	19.0	1709	12	1709.0	12.0	4.7
11UPC02_100	156.9	1.03	2.771	0.043	0.2201	0.0039	0.82669	1348.0	11.0	1282.0	21.0	1450	11	1450.0	11.0	11.6
11UPC02_101	133.4	1.43	2.749	0.039	0.2171	0.0032	0.60714	1343.0	10.0	1266.0	17.0	1450	16	1450.0	16.0	12.7
11UPC02_102	180	2.33	4.592	0.032	0.3047	0.0019	0.54387	1748.3	5.9	1714.5	9.3	1779	7	1779.2	6.8	3.6
11UPC02_103	334.1	0.80	0.662	0.008	0.0820	0.0009	0.63051	515.4	4.8	507.7	5.4	549	15	507.7	5.4	1.5
11UPC02_105	228	1.23	2.594	0.033	0.2057	0.0025	0.85876	1298.1	9.2	1205.0	13.0	1450	9	1450.4	8.5	16.9
11UPC02_106	354	4.26	4.120	0.029	0.2837	0.0021	0.96179	1656.6	6.2	1610.0	11.0	1713	6	1713.0	6.2	6.0
11UPC02_107	126	1.53	2.913	0.033	0.2352	0.0031	0.55423	1384.5	8.6	1361.0	16.0	1421	15	1421.0	15.0	4.2
11UPC02_108	75	1.56	1.784	0.025	0.1743	0.0024	0.58424	1041.2	8.8	1036.0	13.0	1049	14	1036.0	13.0	0.5
11UPC02_109	110.9	1.09	1.728	0.030	0.1659	0.0024	0.48556	1018.0	11.0	989.0	13.0	1077	16	989.0	13.0	2.8
11UPC02_110	328.2	1.04	2.637	0.027	0.2118	0.0024	0.70146	1310.5	7.5	1238.0	13.0	1432	10	1432.0	10.0	13.5
11UPC02_111	109	0.74	2.980	0.027	0.2388	0.0021	0.56936	1403.9	7.1	1380.0	11.0	1433	10	1432.5	9.9	3.7
11UPC02_112	137.6	1.40	2.984	0.029	0.2407	0.0024	0.71120	1403.1	7.4	1390.0	13.0	1420	10	1420.0	10.0	2.1
11UPC02_114	107	2.02	3.029	0.027	0.2413	0.0023	0.54944	1414.4	6.8	1393.0	12.0	1453	10	1453.0	10.0	4.1
11UPC02_115	197.3	1.17	4.251	0.043	0.3024	0.0034	0.87888	1683.5	8.3	1703.0	17.0	1662	7	1661.7	7.2	2.5
11UPC02_116	26.41	0.49	1.937	0.041	0.1823	0.0022	0.10837	1089.0	13.0	1081.0	12.0	1114	23	1081.0	12.0	0.7
11UPC02_117	122.2	0.75	4.575	0.030	0.3082	0.0023	0.64089	1745.2	5.3	1732.0	11.0	1758	7	1758.0	7.4	1.5
11UPC02_118	112.4	0.80	4.122	0.026	0.2936	0.0019	0.38942	1658.5	5.2	1659.5	9.3	1652	6	1651.8	5.9	0.5
11UPC02_119	11.56	1.30	1.810	0.150	0.1684	0.0049	0.36111	1021.0	49.0	1002.0	27.0	1221	92	1002.0	27.0	1.9
11UPC02_120	62	1.10	3.037	0.042	0.2446	0.0027	0.46247	1417.0	11.0	1410.0	14.0	1413	16	1413.0	16.0	0.2

11UPC03_1	105	1.34	2.741	0.022	0.2288	0.0021	0.58286	1339.9	6.1	1328.0	11.0	1358	9	1358.4	8.7	2.2
11UPC03_2	111.7	0.81	4.648	0.042	0.3097	0.0028	0.62388	1758.4	7.4	1739.0	14.0	1776	10	1775.8	9.5	2.1
11UPC03_3	168.4	2.52	4.043	0.029	0.2838	0.0023	0.61016	1642.5	5.9	1610.0	11.0	1690	8	1690.3	7.7	4.8
11UPC03_4	41.7	1.16	2.614	0.045	0.1965	0.0033	0.19882	1305.0	12.0	1156.0	18.0	1531	25	1156.0	18.0	11.4
11UPC03_5	319	1.51	2.019	0.032	0.1536	0.0027	0.82599	1121.0	11.0	921.0	15.0	1541	13	921.0	15.0	17.8
11UPC03_6	26.1	0.60	2.600	0.037	0.2144	0.0025	0.13840	1300.0	10.0	1252.0	13.0	1398	18	1398.0	18.0	10.4
11UPC03_7	100.5	0.76	3.002	0.040	0.2392	0.0028	0.64264	1410.1	9.3	1382.0	15.0	1436	12	1436.0	12.0	3.8
11UPC03_8	62.7	1.35	2.773	0.043	0.2265	0.0039	0.62096	1350.0	12.0	1315.0	20.0	1388	19	1388.0	19.0	5.3
11UPC03_9	83.2	0.91	1.857	0.021	0.1756	0.0020	0.39877	1065.5	7.5	1043.0	11.0	1121	14	1043.0	11.0	2.1
11UPC03_10	172	1.57	1.730	0.018	0.1648	0.0015	0.43032	1020.0	6.7	983.5	8.4	1103	12	983.5	8.4	3.6
11UPC03_11	217	1.27	3.033	0.046	0.2426	0.0036	0.97576	1414.0	12.0	1399.0	19.0	1440	7	1440.3	7.3	2.9
11UPC03_12	124.7	0.92	2.990	0.027	0.2382	0.0024	0.54680	1404.6	6.8	1377.0	13.0	1437	10	1437.0	10.0	4.2
11UPC03_13	119	1.01	2.826	0.027	0.2360	0.0028	0.48527	1361.9	7.2	1366.0	14.0	1358	11	1358.0	11.0	0.6
11UPC03_14	76.1	1.81	4.231	0.038	0.2986	0.0028	0.30120	1681.4	7.6	1684.0	14.0	1691	12	1691.0	12.0	0.4
11UPC03_15	118	0.84	1.869	0.021	0.1764	0.0016	0.42418	1070.6	7.1	1047.0	8.7	1116	13	1047.0	8.7	2.2
11UPC03_16	130.2	3.14	4.189	0.046	0.2912	0.0032	0.79464	1671.1	9.1	1650.0	16.0	1702	9	1701.9	9.3	3.0
11UPC03_18	124.3	0.74	3.026	0.030	0.2423	0.0029	0.46636	1414.6	7.4	1398.0	15.0	1443	13	1443.0	13.0	3.1
11UPC03_19	91.2	1.72	3.042	0.027	0.2419	0.0022	0.51792	1418.7	6.7	1396.0	11.0	1449	9	1449.2	9.0	3.7
11UPC03_20	169.8	3.06	4.144	0.043	0.2909	0.0034	0.66076	1662.3	8.5	1646.0	17.0	1677	11	1677.0	11.0	1.8
11UPC03_21	106.1	1.26	3.104	0.041	0.2446	0.0030	0.64203	1434.0	10.0	1410.0	15.0	1454	11	1454.0	11.0	3.0
11UPC03_22	87.4	1.75	2.969	0.028	0.2393	0.0019	0.43706	1400.1	7.4	1383.0	9.8	1429	12	1429.0	12.0	3.2
11UPC03_23	145	1.74	1.580	0.023	0.1499	0.0023	0.88714	962.8	9.3	900.0	13.0	1111	12	900.0	13.0	6.5
11UPC03_24	173.9	2.59	4.445	0.061	0.3065	0.0050	0.85196	1719.0	11.0	1723.0	25.0	1719	12	1719.0	12.0	0.2
11UPC03_25	176	0.63	2.789	0.024	0.2314	0.0018	0.56626	1352.1	6.3	1341.5	9.4	1371	8	1371.4	7.8	2.2
11UPC03_26	40.43	0.68	14.330	0.210	0.5125	0.0076	0.84839	2771.0	14.0	2666.0	32.0	2841	10	2841.3	9.8	6.2
11UPC03_27	201.7	1.44	2.800	0.027	0.2311	0.0026	0.82125	1354.9	7.3	1340.0	13.0	1383	9	1382.5	8.5	3.1
11UPC03_28	52.2	0.96	1.939	0.026	0.1844	0.0021	0.31807	1093.7	9.1	1091.0	11.0	1114	17	1091.0	11.0	0.2
11UPC03_29	70.7	1.75	2.931	0.050	0.2327	0.0043	0.76831	1388.0	13.0	1348.0	23.0	1448	14	1448.0	14.0	6.9
11UPC03_30	86.7	1.17	1.880	0.018	0.1719	0.0018	0.48207	1075.6	6.2	1023.9	9.7	1170	14	1023.9	9.7	4.8

11UPC03_31	86	0.72	2.849	0.069	0.2384	0.0056	0.88827	1365.0	18.0	1377.0	29.0	1358	19	1358.0	19.0	1.4
11UPC03_32	136.3	1.54	3.942	0.037	0.2811	0.0023	0.65968	1621.8	7.6	1598.0	12.0	1656	8	1656.4	8.1	3.5
11UPC03_33	68.5	2.47	4.221	0.056	0.2968	0.0029	0.91903	1677.0	11.0	1675.0	15.0	1686	10	1685.8	9.6	0.6
11UPC03_34	200	0.94	2.850	0.028	0.2357	0.0024	0.76509	1368.2	7.5	1366.0	13.0	1374	8	1373.8	8.2	0.6
11UPC03_35	75.6	1.43	3.106	0.034	0.2491	0.0025	0.83182	1433.4	8.3	1434.0	13.0	1439	10	1439.0	10.0	0.3
11UPC03_36	82.7	2.47	3.137	0.032	0.2514	0.0029	0.82468	1441.2	7.9	1446.0	15.0	1448	10	1448.2	9.5	0.2
11UPC03_37	83.2	0.55	2.854	0.038	0.2373	0.0035	0.58990	1369.0	10.0	1372.0	18.0	1347	14	1347.0	14.0	1.9
11UPC03_38	104.9	1.59	2.825	0.029	0.2333	0.0022	0.67654	1361.7	7.7	1352.0	12.0	1384	10	1384.1	9.5	2.3
11UPC03_39	88.8	2.17	4.010	0.049	0.2821	0.0027	0.62319	1638.0	10.0	1602.0	14.0	1699	12	1699.0	12.0	5.7
11UPC03_40	70	0.40	3.099	0.046	0.2490	0.0043	0.91836	1428.0	13.0	1432.0	23.0	1432	13	1432.0	13.0	0.0
11UPC03_41	31.9	3.34	5.166	0.069	0.3317	0.0033	0.37672	1846.0	11.0	1846.0	16.0	1838	15	1838.0	15.0	0.4
11UPC03_42	77	1.68	4.171	0.044	0.2926	0.0035	0.54330	1667.5	8.6	1654.0	17.0	1701	11	1701.0	11.0	2.8
11UPC03_43	121	2.12	3.267	0.044	0.2630	0.0033	0.95234	1472.0	10.0	1505.0	17.0	1426	9	1425.8	8.5	5.6
11UPC03_44	222	2.28	4.216	0.091	0.2946	0.0061	0.98461	1674.0	20.0	1663.0	31.0	1684	15	1684.0	15.0	1.2
11UPC03_45	102.2	4.57	3.494	0.039	0.2600	0.0026	0.66232	1525.4	8.8	1490.0	13.0	1583	12	1583.0	12.0	5.9
11UPC03_46	84.2	1.36	4.111	0.088	0.2838	0.0060	0.96883	1655.0	19.0	1610.0	30.0	1715	11	1715.0	11.0	6.1
11UPC03_47	126	1.50	4.365	0.044	0.3032	0.0029	0.94380	1705.1	8.4	1707.0	14.0	1703	6	1703.2	6.1	0.2
11UPC03_48	160	0.71	2.749	0.030	0.2278	0.0027	0.81823	1341.3	8.1	1322.0	14.0	1377	8	1377.0	7.5	4.0
11UPC03_49	83.2	0.65	2.888	0.027	0.2380	0.0022	0.55418	1378.3	7.1	1376.0	11.0	1373	10	1373.4	9.7	0.2
11UPC03_50	136.4	0.92	3.157	0.079	0.2490	0.0037	0.84255	1440.0	16.0	1433.0	19.0	1471	24	1471.0	24.0	2.6
11UPC03_51	105.3	1.91	3.081	0.030	0.2471	0.0023	0.48998	1428.2	7.3	1424.0	12.0	1444	12	1444.0	12.0	1.4
11UPC03_52	110	0.90	2.941	0.027	0.2370	0.0019	0.25626	1392.2	7.1	1371.0	9.7	1432	12	1432.0	12.0	4.3
11UPC03_53	118	0.61	2.869	0.032	0.2374	0.0024	0.80504	1373.1	8.5	1373.0	12.0	1374	10	1374.0	10.0	0.1
11UPC03_54	83.9	2.40	4.369	0.038	0.3019	0.0026	0.53256	1706.9	7.2	1701.0	13.0	1701	8	1700.8	8.2	0.0
11UPC03_55	13.57	0.86	2.175	0.058	0.1771	0.0040	0.47768	1178.0	19.0	1051.0	22.0	1396	25	1051.0	22.0	10.8
11UPC03_56	56.6	0.54	2.761	0.034	0.2288	0.0026	0.57324	1347.0	9.5	1328.0	14.0	1377	12	1377.0	12.0	3.6
11UPC03_57	146	0.60	4.200	0.051	0.2945	0.0033	0.97142	1673.0	10.0	1664.0	17.0	1683	9	1683.2	8.6	1.1
11UPC03_58	91	1.49	4.293	0.039	0.2919	0.0026	0.94372	1691.6	7.4	1651.0	13.0	1742	9	1741.7	8.9	5.2
11UPC03_59	185	1.19	3.345	0.089	0.2423	0.0060	0.96168	1491.0	21.0	1397.0	31.0	1612	11	1612.0	11.0	13.3
11UPC03_60	106.5	1.03	3.805	0.045	0.2681	0.0027	0.66766	1593.1	9.5	1531.0	14.0	1673	11	1673.0	11.0	8.5

11UPC03_62	259	4.27	3.845	0.030	0.2677	0.0019	0.76733	1601.9	6.3	1529.0	9.8	1695	7	1695.0	6.7	9.8
11UPC03_63	129.4	1.92	4.344	0.042	0.3050	0.0026	0.53877	1701.2	8.0	1716.0	13.0	1685	10	1685.4	9.6	1.8
11UPC03_64	47.5	1.03	4.242	0.092	0.2917	0.0054	0.46531	1681.0	18.0	1650.0	27.0	1713	23	1713.0	23.0	3.7
11UPC03_65	144	0.70	2.604	0.029	0.2138	0.0027	0.72664	1301.1	8.2	1249.0	14.0	1373	9	1372.7	8.8	9.0
11UPC03_66	162	2.39	3.092	0.023	0.2479	0.0017	0.47114	1430.3	5.6	1427.6	9.0	1437	8	1436.5	8.1	0.6
11UPC03_67	159	1.67	2.986	0.026	0.2405	0.0020	0.53328	1403.6	6.5	1391.0	10.0	1430	10	1430.0	10.0	2.7
11UPC03_68	31.6	1.05	1.936	0.033	0.1787	0.0024	0.49243	1094.0	11.0	1060.0	13.0	1165	19	1060.0	13.0	3.1
11UPC03_69	210	1.33	2.747	0.026	0.2274	0.0023	0.79149	1341.6	7.0	1321.0	12.0	1358	7	1357.8	6.9	2.7
11UPC03_70	112.2	1.21	2.885	0.031	0.2392	0.0021	0.55989	1377.3	8.2	1382.0	11.0	1371	12	1371.0	12.0	0.8
11UPC03_71	70.8	2.52	4.177	0.044	0.2939	0.0029	0.59312	1669.9	8.4	1663.0	15.0	1674	6	1674.2	6.3	0.7
11UPC03_73	136.3	1.10	1.894	0.050	0.1483	0.0040	0.90718	1080.0	17.0	891.0	23.0	1458	12	891.0	23.0	17.5
11UPC03_74	81.9	0.50	2.726	0.033	0.2262	0.0024	0.89250	1334.8	9.0	1314.0	12.0	1378	9	1377.7	9.0	4.6
11UPC03_75	231.7	1.84	3.949	0.044	0.2747	0.0031	0.84309	1623.2	9.0	1567.0	16.0	1686	9	1685.8	9.2	7.0
11UPC03_76	69.7	0.73	3.206	0.029	0.2555	0.0022	0.50917	1458.1	7.1	1467.0	11.0	1443	10	1443.2	9.8	1.6
11UPC03_77	87	0.96	1.971	0.024	0.1853	0.0018	0.38244	1108.2	8.5	1095.9	9.9	1125	14	1095.9	9.9	1.1
11UPC03_78	56.5	1.55	4.032	0.038	0.2830	0.0024	0.55531	1640.0	7.6	1606.0	12.0	1681	11	1681.0	11.0	4.5
11UPC03_79	173	1.54	3.631	0.059	0.2499	0.0040	0.92946	1555.0	13.0	1437.0	20.0	1716	10	1716.4	9.6	16.3
11UPC03_80	222.8	0.79	2.939	0.027	0.2309	0.0019	0.59070	1391.6	7.0	1339.1	9.9	1469	9	1469.3	8.5	8.9
11UPC03_81	114	1.13	4.083	0.036	0.2870	0.0024	0.71581	1653.1	7.3	1626.0	12.0	1689	8	1688.8	7.9	3.7
11UPC03_82	42	2.28	3.071	0.040	0.2469	0.0025	0.44345	1425.7	9.9	1424.0	13.0	1428	14	1428.0	14.0	0.3
11UPC03_83	42.1	1.44	3.158	0.050	0.2474	0.0040	0.65279	1447.0	13.0	1427.0	20.0	1459	17	1459.0	17.0	2.2
11UPC03_84	51.3	0.73	1.964	0.034	0.1854	0.0025	0.47021	1104.0	12.0	1096.0	14.0	1114	20	1096.0	14.0	0.7
11UPC03_85	52.4	0.99	3.114	0.029	0.2458	0.0023	0.44700	1435.7	7.3	1418.0	12.0	1454	12	1454.0	12.0	2.5
11UPC03_86	163	0.89	1.758	0.019	0.1678	0.0016	0.77997	1029.7	7.0	999.8	8.7	1095	13	999.8	8.7	2.9
11UPC03_87	77.1	1.23	4.237	0.041	0.2965	0.0029	0.71993	1681.8	8.2	1674.0	14.0	1677	10	1677.0	10.0	0.2
11UPC03_88	134.3	0.95	2.831	0.034	0.2259	0.0023	0.72166	1363.1	8.9	1313.0	12.0	1448	10	1448.0	10.0	9.3
11UPC03_89	234	1.49	4.054	0.039	0.2796	0.0030	0.67844	1644.8	7.8	1592.0	15.0	1708	8	1708.1	7.5	6.8
11UPC03_90	178.5	1.04	4.640	0.038	0.3126	0.0029	0.89551	1756.0	6.8	1753.0	14.0	1757	6	1757.3	6.2	0.2
11UPC03_91	57.1	0.55	12.707	0.075	0.5108	0.0037	0.41915	2657.9	5.6	2659.0	16.0	2647	6	2647.4	5.6	0.4
11UPC03_92	51.7	1.07	1.938	0.026	0.1828	0.0019	0.30436	1093.4	9.0	1083.0	11.0	1130	17	1083.0	11.0	1.0

11UPC03_93	122	1.43	4.194	0.032	0.2972	0.0020	0.58113	1672.4	6.2	1677.1	9.7	1662	8	1662.2	7.7	0.9
11UPC03_94	147.8	0.98	2.917	0.034	0.2321	0.0033	0.66633	1385.6	8.9	1345.0	17.0	1449	13	1449.0	13.0	7.2
11UPC03_95	112.6	2.34	4.660	0.039	0.3109	0.0024	0.67295	1760.6	6.8	1745.0	12.0	1776	7	1775.8	7.1	1.7
11UPC03_96	137	0.88	3.030	0.061	0.2399	0.0058	0.98649	1405.0	24.0	1385.0	31.0	1435	13	1435.0	13.0	3.5
11UPC03_97	119.1	1.27	3.195	0.030	0.2557	0.0023	0.65547	1456.3	7.3	1468.0	12.0	1436	8	1435.8	7.8	2.2
11UPC03_98	83.2	1.12	2.818	0.037	0.2348	0.0029	0.65183	1359.4	9.8	1359.0	15.0	1357	10	1357.0	10.0	0.1
11UPC03_99	144.7	1.59	1.911	0.024	0.1790	0.0020	0.57831	1084.5	8.3	1061.0	11.0	1132	13	1061.0	11.0	2.2
11UPC03_100	122.6	1.93	4.568	0.046	0.3089	0.0037	0.90338	1745.0	9.1	1735.0	18.0	1745	10	1745.0	10.0	0.6
11UPC03_101	72.5	1.51	2.771	0.034	0.2283	0.0030	0.61213	1346.9	9.3	1325.0	16.0	1368	14	1368.0	14.0	3.1
11UPC03_102	66.3	1.36	4.250	0.044	0.3000	0.0026	0.29593	1683.0	8.5	1693.0	13.0	1670	12	1670.0	12.0	1.4
11UPC03_103	42.1	0.88	1.978	0.027	0.1870	0.0021	0.24771	1107.1	9.4	1105.0	11.0	1102	20	1105.0	11.0	0.2
11UPC03_104	107.2	2.14	3.122	0.029	0.2515	0.0025	0.50281	1439.1	6.9	1446.0	13.0	1423	11	1423.0	11.0	1.6
11UPC03_105	64.5	1.38	1.993	0.029	0.1877	0.0030	0.60718	1112.4	9.7	1108.0	16.0	1104	15	1108.0	16.0	0.4
11UPC03_106	74.6	1.46	1.890	0.026	0.1775	0.0017	0.30193	1076.8	9.2	1053.0	9.3	1105	13	1053.0	9.3	2.2
11UPC03_107	78.9	3.07	4.947	0.064	0.3180	0.0036	0.68043	1809.0	11.0	1779.0	18.0	1837	9	1836.8	9.1	3.1
11UPC03_108	111.2	1.70	3.901	0.045	0.2809	0.0034	0.69164	1613.2	9.2	1595.0	17.0	1639	11	1639.0	11.0	2.7
11UPC03_109	89.7	1.75	4.166	0.036	0.2931	0.0025	0.42157	1666.9	7.1	1657.0	12.0	1682	9	1682.3	8.7	1.5
11UPC03_110	121.3	0.80	2.356	0.036	0.2046	0.0033	0.60671	1229.0	11.0	1203.0	17.0	1264	17	1264.0	17.0	4.8
11UPC03_111	45.8	0.80	5.170	0.220	0.3134	0.0040	0.69359	1842.0	36.0	1757.0	19.0	1943	59	1943.0	59.0	9.6
11UPC03_112	58.68	0.58	2.934	0.028	0.2395	0.0025	0.45436	1390.5	7.1	1384.0	13.0	1381	11	1381.0	11.0	0.2
11UPC03_113	104.9	1.40	1.929	0.018	0.1849	0.0014	0.42749	1090.9	6.2	1094.5	7.6	1090	11	1094.5	7.6	0.3
11UPC03_114	103.8	1.88	3.037	0.025	0.2405	0.0018	0.40640	1416.8	6.3	1389.4	9.3	1456	11	1456.0	11.0	4.6
11UPC03_115	69.2	2.12	4.250	0.040	0.2943	0.0028	0.50922	1683.1	7.8	1663.0	14.0	1717	11	1717.0	11.0	3.1
11UPC03_116	80.9	0.75	2.791	0.034	0.2306	0.0023	0.62635	1352.2	9.2	1339.0	12.0	1374	12	1374.0	12.0	2.5
11UPC03_118	79.9	0.82	12.430	0.130	0.5163	0.0058	0.74032	2637.0	10.0	2683.0	25.0	2599	10	2598.5	9.7	3.3
11UPC03_119	31.7	0.58	2.519	0.049	0.2095	0.0035	0.37006	1276.0	14.0	1228.0	19.0	1371	21	1371.0	21.0	10.4
11UPC03_120	56.8	0.99	1.910	0.024	0.1763	0.0018	0.36427	1083.9	8.5	1047.7	9.8	1155	15	1047.7	9.8	3.3
11UPC03_121	176.6	1.84	4.728	0.032	0.3161	0.0024	0.25471	1772.8	5.9	1770.0	12.0	1775	8	1775.3	8.2	0.3

11UPC04_1	111.5	0.99	3.178	0.035	0.2506	0.0022	0.45491	1453.4	8.1	1442	11	1466	12	1466	12	1.6
11UPC04_2	245.1	1.775	4.409	0.034	0.3079	0.0023	0.87928	1713.7	6.4	1730	11	1698.5	5.6	1698.5	5.6	1.9
11UPC04_3	45.7	1.168	2.008	0.053	0.1824	0.0029	0.14708	1111	16	1080	16	1216	26	1080	16	2.8
11UPC04_4	194	1.481	3.196	0.037	0.2545	0.0036	0.30087	1455.3	8.9	1464	18	1466	18	1466	18	0.1
11UPC04_5	62	1.52	3.401	0.052	0.2678	0.0036	0.37435	1503	12	1529	18	1472	16	1472	16	3.9
11UPC04_6	45	0.792	1.711	0.027	0.1663	0.0027	0.63199	1012	10	992	15	1098	16	992	15	2.0
11UPC04_7	162	1.88	3.126	0.025	0.2516	0.0016	0.53629	1439.7	6.3	1446.9	8.4	1432.7	8.9	1432.7	8.9	1.0
11UPC04_8	58.6	0.885	3.510	0.049	0.2768	0.0049	0.50007	1529	11	1575	25	1457	18	1457	18	8.1
11UPC04_9	108.2	1.577	2.436	0.029	0.2149	0.0029	0.61692	1252.7	8.6	1255	16	1260	13	1260	13	0.4
11UPC04_10	365	2.011	2.694	0.022	0.2292	0.0019	0.79286	1327.2	6.2	1330	10	1334.9	6.1	1334.9	6.1	0.4
11UPC04_11	67.6	0.511	4.110	0.057	0.2990	0.0037	0.7241	1657	12	1686	18	1622	11	1622	11	3.9
11UPC04_12	111	1.784	2.712	0.022	0.2315	0.0016	0.50078	1331.4	6	1342.1	8.5	1309	10	1309	10	2.5
11UPC04_13	138	1.8	1.840	0.025	0.1785	0.0020	0.58915	1059.1	8.8	1059	11	1064	14	1059	11	0.0
11UPC04_14	67	1.01	3.169	0.033	0.2514	0.0026	0.4864	1450.2	7.8	1445	14	1454	11	1454	11	0.6
11UPC04_15	119.7	1.791	1.710	0.017	0.1678	0.0013	0.3034	1011.9	6.3	999.8	6.9	1042	11	999.8	6.9	1.2
11UPC04_16	79.5	1.388	2.475	0.030	0.2200	0.0020	0.059028	1263.9	8.8	1283	10	1244	14	1244	14	3.1
11UPC04_17	44.2	0.936	2.971	0.051	0.2400	0.0027	0.34167	1399	13	1386	14	1431	15	1431	15	3.1
11UPC04_18	15	1.668	1.973	0.049	0.1838	0.0030	0.43868	1106	17	1088	16	1151	29	1088	16	1.6
11UPC04_19	31.6	0.789	2.863	0.036	0.2368	0.0034	0.49784	1372.6	9.7	1372	17	1374	14	1374	14	0.1
11UPC04_20	101.4	0.852	2.039	0.022	0.1915	0.0022	0.60676	1128.2	7.2	1131	11	1126.2	9.8	1131	11	0.2
11UPC04_21	157	1.861	1.839	0.022	0.1792	0.0014	0.60363	1058.8	7.9	1062.3	7.6	1059	16	1062.3	7.6	0.3
11UPC04_22	32.3	0.753	2.208	0.039	0.1999	0.0028	0.77108	1182	12	1174	15	1193	18	1174	15	0.7
11UPC04_23	243	1.048	2.381	0.027	0.2112	0.0023	0.63888	1236.4	8	1235	12	1239	10	1239	10	0.3
11UPC04_24	146.6	0.7863	3.225	0.025	0.2577	0.0015	0.38823	1462.7	6.1	1477.9	7.9	1445.8	8.1	1445.8	8.1	2.2
11UPC04_25	144	1.86	3.881	0.042	0.2774	0.0030	0.86865	1609.2	8.8	1578	15	1648.3	9.2	1648.3	9.2	4.3
11UPC04_26	67	0.83	3.177	0.028	0.2545	0.0018	0.4613	1451.1	6.7	1461.4	9.3	1442.4	8.5	1442.4	8.5	1.3
11UPC04_27	93.5	0.913	12.130	0.120	0.5002	0.0056	0.82352	2614.9	9.2	2614	24	2613.6	7.4	2613.6	7.4	0.0
11UPC04_28	92	1.16	3.209	0.030	0.2561	0.0021	0.54129	1460.6	7.1	1469	11	1456	11	1456	11	0.9
11UPC04_29	69.9	0.866	2.947	0.063	0.2358	0.0045	0.72353	1391	16	1364	23	1441	17	1441	17	5.3
11UPC04_30	18.79	1.394	2.033	0.053	0.1863	0.0037	0.2197	1121	17	1101	20	1183	35	1101	20	1.8

11UPC04_31	147	1.122	3.190	0.028	0.2546	0.0026	0.71109	1454.3	6.8	1462	13	1433	8.3	1433	8.3	2.0
11UPC04_32	69.2	0.625	3.265	0.043	0.2607	0.0023	0.13959	1472	10	1493	12	1437	18	1437	18	3.9
11UPC04_33	59.8	0.621	2.744	0.038	0.2278	0.0030	0.4	1339	10	1323	16	1362	15	1362	15	2.9
11UPC04_34	267	2.046	2.201	0.023	0.2022	0.0021	0.88168	1180.8	7.5	1187	11	1181	11	1187	11	0.5
11UPC04_35	15.94	0.766	2.056	0.073	0.1841	0.0033	0.33655	1129	24	1089	18	1181	44	1089	18	3.5
11UPC04_36	138.9	1.813	1.624	0.021	0.1631	0.0022	0.28827	980	7.8	974	12	1008	21	974	12	0.6
11UPC04_37	151	1.8	3.315	0.039	0.2638	0.0032	0.62374	1483.9	9.1	1509	16	1463	13	1463	13	3.1
11UPC04_38	74	2.15	1.837	0.024	0.1786	0.0018	0.3506	1058	8.6	1059	10	1060	15	1059	10	0.1
11UPC04_39	103	1.878	3.268	0.045	0.2602	0.0036	0.85798	1473	11	1490	19	1456	15	1456	15	2.3
11UPC04_40	205	1.3	1.950	0.016	0.1886	0.0012	0.61135	1098.2	5.7	1113.7	6.7	1068	10	1113.7	6.7	1.4
11UPC04_41	12.3	1.38	2.613	0.073	0.2276	0.0043	0.3822	1307	20	1321	23	1302	22	1302	22	1.5
11UPC04_42	60.6	1.078	3.265	0.044	0.2635	0.0028	0.84722	1472	10	1507	14	1440	11	1440	11	4.7
11UPC04_43	248	2.65	4.148	0.056	0.2882	0.0048	0.6925	1664	11	1632	24	1697.1	8.1	1697.1	8.1	3.8
11UPC04_44	93.8	2.046	1.603	0.017	0.1596	0.0017	0.56279	971.7	6.5	954.2	9.7	1020	14	954.2	9.7	1.8
11UPC04_45	79.8	1.606	1.466	0.029	0.1409	0.0029	0.61671	915	12	850	16	1064	19	850	16	7.1
11UPC04_46	125	3.42	3.301	0.046	0.2662	0.0043	0.72838	1483	12	1524	22	1435	15	1435	15	6.2
11UPC04_47	88.7	0.722	1.999	0.030	0.1879	0.0028	0.6532	1114.3	9.9	1110	15	1111	17	1110	15	0.4
11UPC04_48	103.4	0.895	2.984	0.057	0.2400	0.0047	0.83768	1402	15	1386	25	1445	13	1445	13	4.1
11UPC04_49	37.2	0.7	3.097	0.043	0.2456	0.0024	0.13033	1431	11	1416	12	1457	19	1457	19	2.8
11UPC04_50	87.9	0.4276	2.669	0.024	0.2281	0.0019	0.29207	1319.5	6.7	1324.5	9.9	1323	13	1323	13	0.1
11UPC04_51	83.4	1.033	4.344	0.061	0.3029	0.0045	0.63342	1703	12	1705	22	1695	16	1695	16	0.6
11UPC04_52	81	1.009	4.631	0.078	0.3174	0.0059	0.78662	1753	14	1776	29	1726	16	1726	16	2.9
11UPC04_53	19.8	1.302	2.834	0.054	0.2367	0.0033	0.15079	1367	13	1369	17	1358	22	1358	22	0.8
11UPC04_54	195	2.044	2.193	0.017	0.2031	0.0015	0.45682	1178.4	5.3	1191.9	8	1160.3	9.7	1191.9	8	1.1
11UPC04_55	204	1.634	2.356	0.019	0.2132	0.0017	0.71772	1229	5.9	1245.9	9.1	1211.8	8.3	1211.8	8.3	2.8
11UPC04_56	218.3	3.81	4.375	0.027	0.3052	0.0019	0.42842	1707.3	5	1717	9.5	1704	6.2	1704	6.2	0.8
11UPC04_57	138	1.94	2.879	0.033	0.2357	0.0024	0.87242	1377.4	9.2	1364	13	1405	11	1405	11	2.9
11UPC04_58	278	1.213	11.188	0.094	0.4734	0.0040	0.94945	2538.3	8.1	2498	18	2573.1	7.1	2573.1	7.1	2.9
11UPC04_59	112	1.256	2.790	0.023	0.2335	0.0017	0.38499	1352.4	6.1	1354.1	9	1346.4	8.2	1346.4	8.2	0.6
11UPC04_60	42.1	0.925	2.138	0.028	0.1951	0.0020	0.27145	1162.6	9.1	1149	11	1177	21	1149	11	1.2

11UPC04_61	54.7	0.861	1.689	0.022	0.1661	0.0017	0.35785	1003.8	8.4	991.4	9.2	1045	16	991.4	9.2	1.2
11UPC04_62	97.6	1.487	2.907	0.034	0.2393	0.0026	0.44255	1383	8.7	1383	13	1396	13	1396	13	0.9
11UPC04_63	24.13	0.524	1.722	0.032	0.1676	0.0027	0.3538	1017	12	998	15	1095	22	998	15	1.9
11UPC04_64	245	1.599	1.998	0.021	0.1905	0.0018	0.94036	1114.4	7.1	1123.8	9.7	1105.5	5.8	1123.8	9.7	0.8
11UPC04_65	178	3.62	3.068	0.036	0.2491	0.0024	0.78237	1424	9.1	1434	12	1425.8	7.1	1425.8	7.1	0.6
11UPC04_66	53.3	1.601	1.618	0.025	0.1592	0.0020	0.21096	976.5	9.6	952	11	1039	19	952	11	2.5
11UPC04_67	31.9	1.139	2.955	0.054	0.2447	0.0040	0.85835	1394	14	1410	21	1387	20	1387	20	1.7
11UPC04_68	19	0.448	1.689	0.039	0.1613	0.0026	0.19309	1002	15	963	14	1094	23	963	14	3.9
11UPC04_69	74.5	0.6267	1.662	0.020	0.1667	0.0017	0.36999	994.5	7.5	993.7	9.4	988	15	993.7	9.4	0.1
11UPC04_70	102	1.164	1.893	0.024	0.1821	0.0018	0.334	1079	8.4	1078.2	9.9	1095	15	1078.2	9.9	0.1
11UPC04_71	149.3	1.117	3.158	0.028	0.2497	0.0017	0.4551	1446.5	6.9	1436.6	8.9	1462	10	1462	10	1.7
11UPC04_72	52.6	1.208	4.420	0.130	0.2914	0.0036	0.14313	1712	22	1648	18	1820	41	1820	41	9.5
11UPC04_73	164	1.438	1.879	0.018	0.1838	0.0012	0.26548	1075	6.7	1087.7	6.6	1054	11	1087.7	6.6	1.2
11UPC04_74	157.4	1.8	3.995	0.033	0.2764	0.0021	0.45187	1632.8	6.7	1573	11	1716.2	8.4	1716.2	8.4	8.3
11UPC04_75	22.5	0.762	11.390	0.140	0.4596	0.0052	0.51808	2555	11	2437	23	2641	11	2641	11	7.7
11UPC04_76	196.6	6.11	1.856	0.018	0.1806	0.0014	0.4193	1066.6	6.2	1070	7.9	1061	11	1070	7.9	0.3
11UPC04_77	32.5	0.876	1.970	0.035	0.1632	0.0026	0.48808	1106	12	974	14	1380	19	974	14	11.9
11UPC04_78	121.3	1.028	2.143	0.024	0.2009	0.0015	0.68482	1163.1	7.5	1181.4	8.3	1154	11	1181.4	8.3	1.6
11UPC04_79	22.14	2.158	2.176	0.036	0.1920	0.0028	0.066857	1174	11	1132	15	1238	25	1132	15	3.6
11UPC04_80	52.82	1.206	2.501	0.052	0.2100	0.0036	0.55237	1270	15	1228	19	1356	19	1356	19	9.4
11UPC04_81	109.8	1.14	6.370	0.540	0.2970	0.0140	0.93193	2011	72	1667	66	2340	75	2340	75	28.8
11UPC04_82	17.4	0.646	1.753	0.045	0.1711	0.0026	0.072324	1026	16	1018	14	1065	34	1018	14	0.8
11UPC04_83	403	2.717	2.061	0.013	0.1909	0.0011	0.48088	1136.2	4.1	1126.2	6	1160.1	7	1126.2	6	0.9
11UPC04_84	91.1	0.974	3.015	0.028	0.2422	0.0022	0.42097	1411.7	7.1	1398	11	1432	10	1432	10	2.4
11UPC04_85	63.5	0.807	1.885	0.026	0.1796	0.0016	0.1851	1076.4	8.9	1064.9	8.5	1117	18	1064.9	8.5	1.1
11UPC04_86	97	1.411	2.199	0.030	0.1990	0.0020	0.45086	1180	9.4	1170	11	1197	13	1170	11	0.8
11UPC04_87	97	0.81	3.010	0.260	0.1801	0.0038	0.29612	1371	64	1070	21	1920	150	1070	21	22.0
11UPC04_88	222	1.119	2.253	0.018	0.2050	0.0014	0.44819	1197.4	5.7	1201.9	7.6	1200.9	8.5	1200.9	8.5	0.1
11UPC04_89	224	3.51	4.720	0.031	0.3133	0.0024	0.52723	1771.2	5.7	1758	12	1787.5	8.4	1787.5	8.4	1.7
11UPC04_90	237	0.9256	4.077	0.035	0.2974	0.0028	0.72589	1649.2	7	1678	14	1618.7	8.6	1618.7	8.6	3.7

11UPC04_91	283	1.832	1.832	0.017	0.1799	0.0018	0.61013	1056.7	6.1	1066.5	9.9	1037	11	1066.5	9.9	0.9
11UPC04_92	33.9	0.976	1.849	0.050	0.1749	0.0023	0.20437	1057	16	1039	13	1080	35	1039	13	1.7
11UPC04_93	56.5	0.981	1.746	0.027	0.1671	0.0021	0.33804	1027.3	9.6	996	12	1099	20	996	12	3.0
11UPC04_94	180.3	2.988	1.763	0.013	0.1765	0.0012	0.45466	1031.7	4.7	1047.8	6.7	1006.7	8.4	1047.8	6.7	1.6
11UPC04_95	46.2	0.645	3.988	0.066	0.2830	0.0045	0.88128	1630	14	1606	22	1659	13	1659	13	3.2
11UPC04_96	124	1.631	1.802	0.021	0.1790	0.0019	0.56649	1046.6	7.5	1061	10	1016	12	1061	10	1.4
11UPC04_97	64.7	1.3	2.188	0.028	0.2013	0.0020	0.45447	1176.3	9	1182	11	1172	15	1182	11	0.5
11UPC04_98	138	1.082	2.409	0.030	0.2153	0.0027	0.6386	1244.5	9.1	1257	14	1229	12	1229	12	2.3
11UPC04_99	114.5	0.957	3.140	0.039	0.2514	0.0033	0.65584	1441.7	9.5	1445	17	1444	12	1444	12	0.1
11UPC04_100	72.5	1.155	1.846	0.025	0.1788	0.0016	0.58483	1063.5	8.8	1060.1	8.7	1078	14	1060.1	8.7	0.3
11UPC04_101	114.9	1.882	2.656	0.026	0.2202	0.0017	0.36493	1316.6	7.3	1282.6	8.8	1373	12	1373	12	6.6
11UPC04_102	53.9	0.874	4.724	0.048	0.3229	0.0032	0.42146	1773.1	8.5	1804	15	1735	11	1735	11	4.0
11UPC04_103	100.4	1.692	2.804	0.024	0.2316	0.0016	0.32926	1356.4	6.3	1343.8	8	1375.8	8.8	1375.8	8.8	2.3
11UPC04_104	62.8	1.437	1.872	0.028	0.1806	0.0018	0.26634	1070.4	9.8	1070	9.8	1071	17	1070	9.8	0.0
11UPC04_105	144	1.049	1.872	0.017	0.1777	0.0012	0.37932	1071.5	6.2	1054.5	6.8	1105.1	9.1	1054.5	6.8	1.6
11UPC04_106	137.9	14	1.404	0.017	0.1425	0.0013	0.54959	892.1	7.3	858.9	7.3	980	14	858.9	7.3	3.7
11UPC04_107	115	2.307	1.908	0.031	0.1834	0.0019	0.16852	1083	11	1086	10	1075	24	1086	10	0.3
11UPC04_108	119.3	1.62	4.289	0.033	0.2989	0.0019	0.55842	1690.8	6.2	1685.8	9.4	1694.5	6.6	1694.5	6.6	0.5
11UPC04_109	124.7	0.6211	20.840	0.120	0.5760	0.0045	0.66968	3130.7	5.8	2932	18	3264.2	5.6	3264.2	5.6	10.2
11UPC04_110	60.3	1.897	2.198	0.028	0.2036	0.0016	0.51396	1179.7	8.9	1195.9	8.4	1160	12	1195.9	8.4	1.4
11UPC04_111	62	0.764	2.984	0.074	0.2432	0.0054	0.71926	1406	18	1406	27	1413	23	1413	23	0.5
11UPC04_112	68.5	1.508	3.124	0.050	0.2550	0.0042	0.52135	1439	13	1464	22	1429	21	1429	21	2.4
11UPC04_113	26.97	0.935	2.173	0.043	0.1987	0.0027	0.2322	1175	13	1168	15	1194	25	1168	15	0.6
11UPC04_114	85.9	1.595	1.974	0.027	0.1904	0.0020	0.47742	1107.2	9.1	1124	11	1114	15	1124	11	1.5
11UPC04_115	129.3	1.76	4.370	0.047	0.2996	0.0029	0.72227	1705.9	8.9	1689	14	1729.2	7.7	1729.2	7.7	2.3
11UPC04_116	77.6	1.809	2.014	0.023	0.1869	0.0020	0.54349	1119.6	7.8	1104	11	1160	14	1104	11	1.4
11UPC04_117	130.5	1.056	3.029	0.030	0.2452	0.0025	0.69027	1414.4	7.6	1413	13	1428.7	7.6	1428.7	7.6	1.1
11UPC04_118	47.3	1.368	4.330	0.047	0.3029	0.0039	0.58755	1699.5	9.1	1708	19	1690	11	1690	11	1.1
11UPC04_119	41.8	0.984	3.088	0.067	0.2382	0.0028	0.26625	1427	17	1377	15	1499	29	1499	29	8.1
11UPC04_120	93.4	0.786	2.130	0.023	0.1967	0.0019	0.403	1158.1	7.4	1157	10	1154	15	1157	10	0.1

11UPC04_121	449	1.115	2.093	0.044	0.1935	0.0030	0.98857	1144	16	1140	17	1177.7	6.8	1140	17	0.3
11UPC12_1	22.3	2.023	1.968	0.051	0.1863	0.0032	0.12698	1102	18	1101	17	1122	28	1101	17	0.1
11UPC12_2	42.4	1.02	2.094	0.039	0.1937	0.0022	0.053005	1145	13	1141	12	1147	25	1141	12	0.3
11UPC12_3	191	2.054	4.993	0.069	0.3168	0.0043	0.70909	1817	12	1778	22	1864.5	8.3	1864.5	8.3	4.6
11UPC12_4	39.4	1.48	1.932	0.036	0.1786	0.0032	0.37764	1095	13	1061	18	1171	22	1061	18	3.1
11UPC12_5	177.6	2.292	1.751	0.018	0.1746	0.0016	0.52339	1027.2	6.6	1037.3	8.9	995	11	1037.3	8.9	1.0
11UPC12_6	55.1	2.236	2.140	0.052	0.1900	0.0038	0.37378	1161	17	1121	20	1258	29	1121	20	3.4
11UPC12_7	68.4	0.918	1.099	0.029	0.1074	0.0022	0.49734	752	14	658	13	1027	29	658	13	12.5
11UPC12_8	170	1.544	1.565	0.020	0.1594	0.0022	0.40086	956	7.7	953	12	962	16	953	12	0.3
11UPC12_9	191	1.509	1.870	0.019	0.1805	0.0016	0.38626	1070.2	6.6	1069.6	9	1089	11	1069.6	9	0.1
11UPC12_10	87.6	3.65	1.945	0.023	0.1863	0.0023	0.40657	1097.2	8.1	1101	13	1092	13	1101	13	0.3
11UPC12_11	242	1.825	2.167	0.025	0.1940	0.0021	0.66745	1170.9	8	1143	11	1224	11	1143	11	2.4
11UPC12_12	68.3	1.436	2.159	0.030	0.2008	0.0022	0.30373	1167	9.7	1179	12	1163	20	1179	12	1.0
11UPC12_13	56.9	0.527	2.144	0.038	0.1941	0.0029	0.34726	1162	12	1143	15	1196	26	1143	15	1.6
11UPC12_14	132.9	1.568	1.545	0.017	0.1578	0.0015	0.48338	947.8	6.9	945.4	8.1	971	11	945.4	8.1	0.3
11UPC12_15	43.8	0.772	13.460	0.150	0.5235	0.0076	0.63981	2714	10	2716	33	2706	11	2706	11	0.4
11UPC12_16	236.5	2.518	1.669	0.014	0.1662	0.0014	0.47083	996.5	5.4	990.9	7.8	1023	11	990.9	7.8	0.6
11UPC12_17	132	1.661	3.277	0.034	0.2528	0.0023	0.45545	1474.9	8.1	1456	12	1502	14	1502	14	3.1
11UPC12_18	26.48	0.785	1.924	0.037	0.1740	0.0027	0.071094	1091	12	1034	15	1199	29	1034	15	5.2
11UPC12_19	84.9	1.301	1.850	0.028	0.1776	0.0019	0.35665	1063	10	1054	10	1084	18	1054	10	0.8
11UPC12_20	138.8	0.691	2.999	0.068	0.2391	0.0056	0.65516	1406	17	1381	29	1454	22	1454	22	5.0
11UPC12_21	233	2.621	1.737	0.020	0.1710	0.0020	0.63738	1021.8	7.3	1017	11	1028	14	1017	11	0.5
11UPC12_22	783	3.466	0.975	0.020	0.0912	0.0016	0.67868	691	10	562.8	9.3	1127	16	562.8	9.3	18.6
11UPC12_23	370	1.859	1.654	0.018	0.1630	0.0018	0.45679	990.9	6.8	973	10	1040	12	973	10	1.8
11UPC12_24	273	2.063	1.802	0.019	0.1749	0.0016	0.54537	1045.9	6.8	1038.9	9	1057	11	1038.9	9	0.7
11UPC12_25	187	1.31	2.092	0.021	0.1928	0.0021	0.16355	1145.9	6.9	1136	11	1174	16	1136	11	0.9
11UPC12_26	105.8	1.236	2.062	0.022	0.1915	0.0019	0.23691	1135.6	7.4	1129	10	1165	13	1129	10	0.6
11UPC12_27	133.9	1.993	2.678	0.028	0.2262	0.0019	0.31098	1322.7	7.5	1314.6	9.7	1341	12	1341	12	2.0

11UPC12_28	83.7	1.082	1.871	0.029	0.1787	0.0019	0.4005	1070	10	1059	10	1108	14	1059	10	1.0
11UPC12_29	113.6	1.201	4.215	0.055	0.2747	0.0044	0.71809	1676	11	1564	22	1833	9.7	1833	9.7	14.7
11UPC12_30	165.7	3.02	1.770	0.023	0.1716	0.0018	0.48832	1035	8.4	1022.2	9.9	1067	16	1022.2	9.9	1.2
11UPC12_31	74.1	1.376	2.803	0.034	0.2302	0.0019	0.12969	1355.5	9.1	1335	10	1384	13	1384	13	3.5
11UPC12_32	129.7	1.293	1.955	0.033	0.1838	0.0031	0.76984	1099	11	1088	17	1134	14	1088	17	1.0
11UPC12_33	35.8	1.393	1.685	0.034	0.1649	0.0020	0.16624	1001	13	984	11	1039	22	984	11	1.7
11UPC12_34	179	1.806	1.796	0.034	0.1766	0.0025	0.64987	1043	12	1048	14	1044	13	1048	14	0.5
11UPC12_35	130.5	1.315	9.104	0.083	0.4095	0.0051	0.0074129	2347.9	8.3	2212	23	2473.3	8.8	2473.3	8.8	10.6
11UPC12_36	489	2.83	1.803	0.016	0.1679	0.0016	0.45812	1046.1	5.8	1000.6	8.7	1140	12	1000.6	8.7	4.3
11UPC12_37	392	2.064	1.483	0.010	0.1502	0.0012	0.41668	923.9	4.4	902.1	6.7	979.4	9.6	902.1	6.7	2.4
11UPC12_38	133.7	2.049	1.965	0.022	0.1834	0.0017	0.3486	1103.1	7.7	1085.4	9.3	1133	18	1085.4	9.3	1.6
11UPC12_39	86.1	1.352	5.093	0.054	0.3243	0.0030	0.54902	1834.1	9.1	1810	14	1858.6	7.9	1858.6	7.9	2.6
11UPC12_40	57.2	0.739	1.893	0.032	0.1807	0.0020	0.27419	1077	11	1071	11	1102	20	1071	11	0.6
11UPC12_41	99	1.171	2.714	0.041	0.2257	0.0028	0.64984	1333	11	1311	15	1369	13	1369	13	4.2
11UPC12_42	25	0.676	1.703	0.051	0.1584	0.0030	0.39955	1013	19	947	17	1153	26	947	17	6.5
11UPC12_43	211.7	3.528	1.662	0.014	0.1639	0.0015	0.32699	994.5	5.6	978.4	8.1	1030	11	978.4	8.1	1.6
11UPC12_44	47.5	1.424	2.005	0.038	0.1902	0.0026	0.20886	1117	13	1124	14	1111	23	1124	14	0.6
11UPC12_45	78	1.34	2.744	0.038	0.2242	0.0026	0.4585	1340	10	1304	14	1396	12	1396	12	6.6
11UPC12_46	155	1.424	1.818	0.022	0.1732	0.0018	0.23635	1051.3	8	1029.5	9.8	1105	17	1029.5	9.8	2.1
11UPC12_47	90	0.4545	4.582	0.041	0.2976	0.0031	0.42245	1745.5	7.4	1679	15	1810	12	1810	12	7.2
11UPC12_48	38.6	1.955	1.985	0.050	0.1869	0.0030	0.50022	1110	17	1104	16	1153	24	1104	16	0.5
11UPC12_49	446	1.903	1.612	0.021	0.1599	0.0023	0.73097	975.5	8.2	956	13	1012	14	956	13	2.0
11UPC12_50	134	1.004	3.055	0.027	0.2388	0.0023	0.62317	1421.2	6.8	1380	12	1475.1	8.9	1475.1	8.9	6.4
11UPC12_51	174.3	1.87	1.779	0.024	0.1737	0.0023	0.51964	1038.2	8.6	1032	13	1049	19	1032	13	0.6
11UPC12_52	158	2.219	1.849	0.025	0.1786	0.0020	0.44739	1062.3	8.8	1059	11	1081	14	1059	11	0.3
11UPC12_54	64.2	1.351	2.790	0.049	0.2305	0.0033	0.5307	1353	13	1336	17	1383	18	1383	18	3.4
11UPC12_55	21.9	1.226	1.110	0.030	0.1121	0.0023	0.14115	757	14	685	13	976	40	685	13	9.5
11UPC12_56	113.5	1.552	2.112	0.038	0.1837	0.0033	0.51064	1158	13	1087	18	1293	19	1087	18	6.1
11UPC12_57	435	1.782	2.009	0.021	0.1840	0.0019	0.67146	1119.7	6.8	1089	10	1170	13	1089	10	2.7
11UPC12_58	66.3	1.558	5.187	0.066	0.3316	0.0037	0.48653	1849	11	1846	18	1857	10	1857	10	0.6

11UPC12_59	76.8	0.416	1.885	0.029	0.1801	0.0021	0.39796	1075	10	1068	11	1099	18	1068	11	0.7
11UPC12_60	127	1.765	1.748	0.035	0.1733	0.0035	0.48932	1029	13	1033	20	1022	21	1033	20	0.4
11UPC12_61	222	2.172	1.673	0.018	0.1643	0.0019	0.3924	998.2	6.8	980	11	1036	12	980	11	1.8
11UPC12_63	239.9	1.211	2.996	0.026	0.2401	0.0017	0.60861	1406.3	6.5	1387.1	8.8	1440.1	6.8	1440.1	6.8	3.7
11UPC12_64	84.2	0.4736	11.461	0.092	0.4525	0.0039	0.54283	2561	7.5	2406	17	2686.7	7.6	2686.7	7.6	10.4
11UPC12_65	124.1	2.171	1.688	0.022	0.1647	0.0021	0.5631	1003.5	8.1	986	12	1047	15	986	12	1.7
11UPC12_66	47	1.178	2.154	0.036	0.1913	0.0031	0.44859	1169	12	1128	17	1244	22	1128	17	3.5
11UPC12_67	199	0.908	2.126	0.022	0.1968	0.0020	0.53224	1157.8	7	1158	11	1166	11	1158	11	0.0
11UPC12_68	240	10	2.703	0.042	0.2247	0.0038	0.65388	1331	11	1310	19	1352	15	1352	15	3.1
11UPC12_69	218.4	0.7865	3.023	0.030	0.2375	0.0021	0.91411	1413	7.6	1373	11	1472	11	1472	11	6.7
11UPC12_70	87.4	3.478	4.657	0.041	0.2975	0.0026	0.61211	1759	7.3	1678	13	1851	10	1851	10	9.3
11UPC12_71	42.9	1.543	1.626	0.034	0.1686	0.0021	0.40108	984	13	1004	12	946	26	1004	12	2.0
11UPC12_72	48.5	1.151	0.844	0.023	0.0963	0.0016	0.13204	620	13	592.5	9.4	755	36	592.5	9.4	4.4
11UPC12_73	42.7	0.886	2.847	0.039	0.2271	0.0025	0.31779	1367	10	1319	13	1458	16	1458	16	9.5
11UPC12_74	198	1.383	1.582	0.022	0.1574	0.0019	0.67389	962.6	8.5	942	10	1011	15	942	10	2.1
11UPC12_76	188	1.669	1.948	0.020	0.1833	0.0015	0.36462	1098.2	7	1085	8.1	1121	10	1085	8.1	1.2
11UPC12_77	118.5	1.278	1.905	0.031	0.1777	0.0028	0.34419	1082	11	1054	15	1137	19	1054	15	2.6
11UPC12_78	74.8	3.664	1.895	0.030	0.1809	0.0022	0.19755	1078	11	1072	12	1096	22	1072	12	0.6
11UPC12_79	53.1	0.5469	14.260	0.220	0.5320	0.0054	0.63785	2765	14	2752	22	2774	12	2774	12	0.8
11UPC12_80	102.5	1.113	1.980	0.160	0.1578	0.0026	0.63418	1099	53	944	15	1450	120	944	15	14.1
11UPC12_81	82.6	0.872	3.194	0.038	0.2514	0.0020	0.21752	1456	9.2	1445	10	1463	11	1463	11	1.2
11UPC12_82	74.5	0.559	11.110	0.100	0.4513	0.0045	0.5954	2531.9	8.4	2400	20	2640.5	9	2640.5	9	9.1
11UPC12_83	153.9	1.097	1.674	0.018	0.1633	0.0015	0.15509	998.2	6.8	974.8	8.3	1047	15	974.8	8.3	2.3
11UPC12_84	145.5	1.403	2.571	0.022	0.2197	0.0018	0.34188	1291.9	6.3	1280	9.4	1305	11	1305	11	1.9
11UPC12_85	48.9	0.78	5.349	0.073	0.3264	0.0035	0.35391	1877	12	1820	17	1941	17	1941	17	6.2
11UPC12_86	132.6	1.764	1.846	0.018	0.1755	0.0017	0.34935	1062.7	6.2	1041.9	9.5	1118	13	1041.9	9.5	2.0
11UPC12_87	55.7	1.044	1.542	0.034	0.1486	0.0024	0.44706	949	13	893	14	1108	30	893	14	5.9
11UPC12_88	65.9	1.558	3.944	0.046	0.2757	0.0023	0.3769	1621.9	9.4	1570	12	1701	13	1701	13	7.7
11UPC12_89	45.7	1.202	1.562	0.033	0.1577	0.0018	0.12748	955	13	943.6	9.9	976	31	943.6	9.9	1.2
11UPC12_90	73.7	0.657	2.346	0.039	0.2017	0.0021	0.45814	1228	12	1186	11	1302	15	1186	11	3.4

11UPC12_91	34.8	0.582	1.747	0.035	0.1641	0.0028	0.39666	1028	14	979	16	1110	27	979	16	4.8
11UPC12_92	14.71	0.98	1.449	0.054	0.1420	0.0043	0.069023	904	22	855	24	1043	52	855	24	5.4
11UPC12_93	113	0.7849	1.713	0.021	0.1669	0.0016	0.34093	1012.9	7.7	994.8	8.7	1052	17	994.8	8.7	1.8
11UPC12_94	46.6	1.263	3.064	0.050	0.2418	0.0028	0.29924	1425	13	1396	14	1471	23	1471	23	5.1
11UPC12_95	31.47	0.838	1.991	0.070	0.1823	0.0032	0.023692	1109	23	1079	18	1158	42	1079	18	2.7
11UPC12_96	76.5	1.398	4.339	0.041	0.2970	0.0023	0.27275	1701.5	7.5	1676	12	1731	11	1731	11	3.2
11UPC12_97	255.4	0.891	1.775	0.018	0.1707	0.0015	0.51413	1036.7	6.7	1016.1	8.1	1076	11	1016.1	8.1	2.0
11UPC12_98	48.6	1.297	2.027	0.036	0.1878	0.0023	0.54826	1123	12	1109	12	1161	16	1109	12	1.2
11UPC12_99	172	1.51	2.345	0.036	0.1976	0.0028	0.69526	1228	11	1162	15	1344	11	1162	15	5.4
11UPC12_100	253	1.72	1.817	0.035	0.1722	0.0034	0.94543	1050	13	1024	19	1115	13	1024	19	2.5
11UPC12_101	307	2.693	1.612	0.020	0.1589	0.0016	0.50869	976.1	7.8	951.9	9.1	1028	15	951.9	9.1	2.5
11UPC12_102	90	0.648	2.264	0.039	0.1999	0.0032	0.5752	1200	12	1174	17	1256	20	1174	17	2.2
11UPC12_103	60.3	0.545	1.690	0.029	0.1606	0.0025	0.19642	1004	11	960	14	1099	21	960	14	4.4
11UPC12_104	45.3	1.489	2.016	0.032	0.1894	0.0035	0.38845	1120	11	1118	19	1140	18	1118	19	0.2
11UPC12_105	68.3	1.681	2.075	0.030	0.1924	0.0022	0.46857	1140	10	1134	12	1177	16	1134	12	0.5
11UPC12_106	126	1.842	2.062	0.026	0.1907	0.0025	0.38453	1135.5	8.7	1125	14	1152	16	1125	14	0.9
11UPC12_107	101.5	1.24	2.753	0.031	0.2308	0.0026	0.17976	1344.4	8.3	1338	13	1350	19	1350	19	0.9
11UPC12_108	84.8	3.022	1.582	0.028	0.1540	0.0020	0.44061	963	11	923	11	1046	19	923	11	4.2
11UPC12_109	199.3	2.674	1.949	0.024	0.1791	0.0020	0.6133	1097.4	8.1	1062	11	1178	13	1062	11	3.2
11UPC12_111	122.9	1.328	2.808	0.035	0.2212	0.0026	0.59785	1356.7	9.3	1288	14	1471	11	1471	11	12.4
11UPC12_112	117	1.792	1.750	0.025	0.1724	0.0018	0.44964	1028.6	9.1	1025.4	9.8	1041	16	1025.4	9.8	0.3
11UPC12_113	200.5	1.393	3.818	0.042	0.2574	0.0031	0.60451	1596.1	8.9	1479	16	1752	13	1752	13	15.6
11UPC12_114	36.1	1.071	1.652	0.047	0.1546	0.0033	0.35801	987	18	926	18	1153	32	926	18	6.2
11UPC12_115	29.7	0.881	3.128	0.058	0.2423	0.0032	0.34291	1439	15	1403	17	1479	19	1479	19	5.1
11UPC12_116	244	2.068	1.649	0.023	0.1637	0.0021	0.7691	989.7	9.1	977	11	1022	12	977	11	1.3
11UPC12_117	66.5	1.081	1.878	0.029	0.1802	0.0022	0.27642	1072	10	1068	12	1076	24	1068	12	0.4
11UPC12_118	121	1.38	1.810	0.022	0.1737	0.0022	0.47955	1048.6	8	1032	12	1080	19	1032	12	1.6
11UPC12_119	255.2	0.621	1.487	0.020	0.1509	0.0019	0.59702	924.6	8.3	908	11	980	16	908	11	1.8
11UPC12_120	136	0.6781	1.972	0.018	0.1844	0.0015	0.31459	1105.6	6.3	1092	8.2	1134	13	1092	8.2	1.2

11UPC13_1	20.86	0.834	1.971	0.033	0.1865	0.0023	0.10536	1106	11	1102	13	1103	28	1102	13	0.4
11UPC13_2	29.24	0.878	1.890	0.028	0.1810	0.0020	0.40058	1076.7	9.9	1072	11	1093	18	1072	11	0.4
11UPC13_3	80.7	1.285	2.033	0.021	0.1935	0.0016	0.40885	1127.2	7.4	1140.4	8.4	1108	12	1140.4	8.4	1.2
11UPC13_4	89.2	0.927	5.059	0.042	0.3399	0.0028	0.51006	1829.8	7.2	1886	14	1773.5	7.3	1773.5	7.3	6.3
11UPC13_5	79.5	1.074	2.197	0.030	0.2019	0.0024	0.25323	1179.5	9.6	1185	13	1158	23	1185	13	0.5
11UPC13_6	212	1.83	1.944	0.030	0.1831	0.0017	0.33145	1096	10	1083.6	9	1103	25	1083.6	9	1.1
11UPC13_7	73.35	0.7024	2.018	0.021	0.1924	0.0020	0.46266	1121.3	6.9	1136	10	1089	15	1136	10	1.3
11UPC13_8	148.7	1.705	2.064	0.017	0.1992	0.0017	0.65477	1136.6	5.6	1170.7	9.1	1075.6	9.2	1170.7	9.1	3.0
11UPC13_9	151.1	1.423	2.921	0.034	0.2460	0.0025	0.47799	1387.1	8.7	1417	13	1346	15	1346	15	5.3
11UPC13_10	47	0.86	2.922	0.034	0.2446	0.0031	0.51975	1386.8	8.6	1410	16	1358	14	1358	14	3.8
11UPC13_11	82.7	0.951	3.111	0.031	0.2491	0.0026	0.43488	1434.9	7.6	1434	13	1441	13	1441	13	0.5
11UPC13_12	7.09	1.867	13.680	0.170	0.5430	0.0073	0.63836	2728	12	2795	30	2697.7	7.8	2697.7	7.8	3.6
11UPC13_13	87.2	0.887	1.826	0.031	0.1728	0.0027	0.48283	1055	11	1028	15	1104	16	1028	15	2.6
11UPC13_13	111.9	0.736	2.058	0.033	0.1928	0.0030	0.67736	1134	11	1136	16	1129	14	1136	16	0.2
11UPC13_14	164	1.673	2.829	0.021	0.2394	0.0021	0.72666	1363	5.7	1385	11	1328	8.4	1328	8.4	4.3
11UPC13_15	59	0.95	2.994	0.032	0.2490	0.0029	0.57878	1405.6	8.1	1433	15	1358	13	1358	13	5.5
11UPC13_16	99.9	1.619	1.895	0.018	0.1868	0.0019	0.49875	1079.1	6.4	1105	10	1028	13	1105	10	2.4
11UPC13_17	135.3	1.389	3.002	0.025	0.2474	0.0021	0.60859	1407.8	6.4	1425	11	1376.3	6.9	1376.3	6.9	3.5
11UPC13_18	59	0.4574	2.072	0.022	0.1928	0.0019	0.42444	1140.2	7.1	1136	10	1147	15	1136	10	0.4
11UPC13_19	97.2	0.4737	13.495	0.088	0.5382	0.0039	0.63829	2714.6	6.2	2776	16	2673	6.6	2673	6.6	3.9
11UPC13_20	150.8	0.9091	3.382	0.034	0.2681	0.0031	0.60073	1501	8.2	1531	16	1447.2	8.7	1447.2	8.7	5.8
11UPC13_21	52.7	0.97	2.026	0.028	0.1957	0.0022	0.40274	1123.5	9.4	1152	12	1068	15	1152	12	2.5
11UPC13_22	87.9	0.715	2.034	0.021	0.1957	0.0017	0.48281	1126.3	7.2	1152.3	8.9	1079	11	1152.3	8.9	2.3
11UPC13_23	140.4	0.818	4.777	0.039	0.3163	0.0023	0.55289	1780.4	6.8	1772	11	1791.3	6.9	1791.3	6.9	1.1
11UPC13_24	73.6	1.66	2.751	0.029	0.2343	0.0024	0.58748	1341.8	7.8	1357	12	1319	10	1319	10	2.9
11UPC13_25	29.73	0.999	2.118	0.032	0.2013	0.0027	0.43123	1154	10	1182	15	1119	16	1182	15	2.4
11UPC13_26	140.2	5.74	4.865	0.042	0.3208	0.0033	0.75087	1797.7	7.2	1793	16	1800	5.9	1800	5.9	0.4
11UPC13_27	87.2	1.278	1.952	0.023	0.1879	0.0021	0.54554	1100.6	8.4	1110	11	1079	13	1110	11	0.9
11UPC13_28	37	1.679	12.690	0.110	0.4967	0.0043	0.68475	2656.5	8.2	2599	18	2701.9	7	2701.9	7	3.8

11UPC13_29	44.8	1.809	2.320	0.038	0.2132	0.0044	0.46664	1218	12	1245	23	1196	22	1196	23	2.2
11UPC13_30	21.9	1.271	13.470	0.160	0.5271	0.0072	0.75485	2710	12	2728	30	2697.9	9.3	2697.9	9.3	1.1
11UPC13_31	65.8	1.391	1.983	0.021	0.1909	0.0021	0.30034	1110.6	6.9	1126	12	1077	16	1126	12	1.4
11UPC13_32	180	1.117	1.925	0.017	0.1833	0.0016	0.56817	1090.4	5.9	1084.9	8.6	1106.9	9.6	1084.9	8.6	0.5
11UPC13_33	94	1.279	3.014	0.029	0.2491	0.0025	0.58497	1412.4	7.3	1433	13	1377.9	9.1	1377.9	9.1	4.0
11UPC13_34	119.9	4.25	2.061	0.018	0.1962	0.0023	0.52016	1135.7	5.9	1155	12	1095	12	1155	12	1.7
11UPC13_35	15.08	1.156	1.911	0.037	0.1836	0.0031	0.43289	1087	13	1088	17	1103	21	1088	17	0.1
11UPC13_36	98.8	2.461	1.896	0.015	0.1832	0.0017	0.46646	1080.4	5.2	1084.5	9.1	1061	12	1084.5	9.1	0.4
11UPC13_37	26.57	1.666	2.521	0.042	0.2200	0.0029	0.32103	1277	12	1282	15	1264	24	1264	24	1.4
11UPC13_38	98.8	0.996	2.073	0.025	0.1984	0.0020	0.43212	1139.6	8.3	1167	11	1104	16	1167	11	2.4
11UPC13_39	37.66	1.337	2.056	0.025	0.1947	0.0018	0.12442	1133.7	8.3	1146.9	9.9	1101	16	1146.9	9.9	1.2
11UPC13_40	83.9	0.927	1.872	0.021	0.1789	0.0021	0.4759	1070.8	7.5	1061	11	1082	15	1061	11	0.9
11UPC13_41	111.4	1.178	2.245	0.018	0.2075	0.0020	0.53177	1195	5.6	1215	11	1166.7	9.1	1166.7	11	1.7
11UPC13_42	47.3	2.195	2.101	0.028	0.1973	0.0016	0.43315	1148.3	9.1	1160.7	8.8	1119	19	1160.7	8.8	1.1
11UPC13_43	98.8	0.8537	16.530	0.110	0.5753	0.0042	0.72853	2909.3	7	2929	17	2886.3	7.1	2886.3	7.1	1.5
11UPC13_44	206	1.339	1.947	0.031	0.1817	0.0040	0.83024	1099	11	1080	23	1145	14	1080	23	1.7
11UPC13_45	175.1	1.9	1.775	0.025	0.1753	0.0022	0.72046	1035.7	9	1041	12	1007.3	8.3	1041	12	0.5
11UPC13_46	47.9	0.707	2.963	0.030	0.2490	0.0028	0.40117	1397.6	7.7	1433	14	1329	14	1329	14	7.8
11UPC13_47	36.3	1.615	2.769	0.031	0.2355	0.0024	0.42729	1348.8	7.9	1363	12	1330	13	1330	13	2.5
11UPC13_48	151.1	4.38	1.759	0.032	0.1728	0.0032	0.66067	1030	12	1028	18	1038	11	1028	18	0.2
11UPC13_48	45.5	0.758	2.026	0.041	0.1989	0.0038	0.57692	1126	14	1169	20	1060	24	1169	20	3.8
11UPC13_49	69.6	1.0091	2.350	0.024	0.2176	0.0020	0.42506	1227.9	7.4	1269	11	1162	15	1162	11	3.3
11UPC13_50	157	1.98	1.690	0.014	0.1705	0.0017	0.48973	1004.3	5.5	1014.9	9.2	986	11	1014.9	9.2	1.1
11UPC13_51	29.6	0.92	4.293	0.057	0.3035	0.0036	0.68276	1691	11	1708	18	1665	14	1665	14	2.6
11UPC13_52	88.1	1.151	3.105	0.035	0.2503	0.0023	0.54869	1433.2	8.5	1440	12	1425	15	1425	15	1.1
11UPC13_53	6.23	1.016	2.170	0.081	0.1925	0.0045	0.27515	1173	26	1134	24	1250	41	1134	24	3.3
11UPC13_54	87.6	0.5576	1.867	0.017	0.1842	0.0017	0.20911	1069.3	5.9	1089.9	9	1036	11	1089.9	9	1.9
11UPC13_55	209.1	1.546	1.784	0.013	0.1792	0.0015	0.61344	1039.3	4.8	1062.4	8.1	1002.2	7.5	1062.4	8.1	2.2
11UPC13_56	142.6	2.419	2.182	0.030	0.2029	0.0025	0.52823	1174.6	9.4	1191	13	1141	15	1191	13	1.4
11UPC13_57	91.1	1.907	1.965	0.017	0.1884	0.0015	0.40089	1104.1	6.1	1112.6	8.2	1085	11	1112.6	8.2	0.8

11UPC13_58	101	1.098	2.010	0.025	0.1939	0.0023	0.55449	1118.4	8.3	1142	13	1081	12	1142	13	2.1
11UPC13_59	113.3	0.817	13.620	0.100	0.5369	0.0045	0.68972	2723.2	7.1	2770	19	2684.6	7.3	2684.6	7.3	3.2
11UPC13_60	650	1.784	1.709	0.022	0.1562	0.0024	0.85676	1012.4	8	935	13	1180.1	8.6	935	13	7.6
11UPC13_61	59.9	0.6371	2.938	0.027	0.2439	0.0022	0.26276	1392.3	7.2	1407	12	1371	14	1371	14	2.6
11UPC13_62	218.6	1.877	1.918	0.015	0.1864	0.0016	0.68477	1087.1	5.2	1101.7	8.7	1058.9	7.3	1101.7	8.7	1.3
11UPC13_63	12.97	1.045	1.911	0.083	0.1713	0.0045	0.50675	1082	28	1019	25	1215	40	1019	25	5.8
11UPC13_64	138.9	0.977	2.061	0.018	0.1964	0.0018	0.40435	1135.6	5.9	1156	9.6	1078	14	1156	9.6	1.8
11UPC13_65	81.9	1.432	1.937	0.018	0.1845	0.0015	0.28228	1093.7	6.2	1091.2	8.2	1103	12	1091.2	8.2	0.2
11UPC13_66	35.1	0.986	1.934	0.028	0.1853	0.0021	0.23569	1093.5	9.8	1096	11	1077	21	1096	11	0.2
11UPC13_67	236.2	15.4	1.802	0.023	0.1781	0.0024	0.58033	1047.4	8.5	1056	13	1031	14	1056	13	0.8
11UPC13_67	113	2.49	1.933	0.019	0.1883	0.0026	0.39689	1092.2	6.6	1112	14	1045	12	1112	14	1.8
11UPC13_68	101.7	2.315	1.870	0.023	0.1850	0.0019	0.6037	1071.8	7.8	1094	11	1037	13	1094	11	2.1
11UPC13_69	137.1	1.321	2.008	0.023	0.1930	0.0022	0.64122	1118.8	7.8	1138	12	1081	11	1138	12	1.7
11UPC13_70	78.6	1.067	3.380	0.028	0.2649	0.0022	0.4796	1499.5	6.5	1516	12	1473	8.1	1473	8.1	2.9
11UPC13_71	126	0.775	1.747	0.026	0.1727	0.0017	0.59791	1025.3	9.6	1026.6	9.4	1034	17	1026.6	9.4	0.1
11UPC13_72	61.3	1.122	2.849	0.032	0.2344	0.0028	0.65915	1367.9	8.6	1357	15	1396	13	1396	13	2.8
11UPC13_73	34.6	0.598	1.894	0.030	0.1827	0.0028	0.45911	1079	11	1081	15	1089	18	1081	15	0.2
11UPC13_74	14.3	1.05	2.789	0.058	0.2336	0.0042	0.55894	1350	16	1352	22	1375	22	1375	22	1.7
11UPC13_75	59.2	1.083	2.017	0.034	0.1944	0.0026	0.54183	1120	12	1145	14	1083	17	1145	14	2.2
11UPC13_76	126.3	2.251	2.284	0.035	0.2096	0.0033	0.61638	1207	11	1227	18	1163	15	1163	18	1.7
11UPC13_77	30.9	0.4698	2.025	0.034	0.1891	0.0024	0.1624	1123	11	1116	13	1135	21	1116	13	0.6
11UPC13_78	84.2	0.5876	3.027	0.028	0.2493	0.0017	0.34448	1415.6	7.2	1434.6	8.8	1396	11	1396	11	2.8
11UPC13_79	118	3.78	3.458	0.039	0.2725	0.0028	0.59554	1517.3	8.9	1553	14	1484	13	1484	13	4.6
11UPC13_80	105.9	0.626	3.019	0.025	0.2498	0.0021	0.64194	1412.1	6.4	1437	11	1369.2	7.8	1369.2	7.8	5.0
11UPC13_81	251	1.673	1.906	0.018	0.1874	0.0017	0.60705	1083.8	6.3	1107.2	9.5	1040.9	8.7	1107.2	9.5	2.2
11UPC13_82	66.2	1.068	2.103	0.022	0.1976	0.0023	0.60934	1149.4	7.4	1162	12	1125	13	1162	12	1.1
11UPC13_83	89.1	0.5857	3.517	0.030	0.2773	0.0025	0.43425	1530.7	6.8	1580	13	1457	12	1457	12	8.4
11UPC13_84	127.6	0.649	2.104	0.054	0.1829	0.0033	0.76798	1149	18	1083	18	1276	22	1083	18	5.7
11UPC13_84	38.4	0.726	3.043	0.053	0.2587	0.0037	0.014608	1418	13	1483	19	1335	30	1335	30	11.1
11UPC13_85	108.2	1.313	2.326	0.024	0.2124	0.0021	0.65562	1219.8	7.2	1241	11	1182.1	9.5	1182.1	11	1.7

11UPC13_86	109	1.922	1.947	0.018	0.1875	0.0018	0.4838	1097.8	6.1	1109	10	1074	13	1109	10	1.0
11UPC13_87	20.3	1.245	2.329	0.064	0.2102	0.0031	0.43929	1218	19	1229	17	1213	36	1213	36	1.3
11UPC13_88	115.7	0.724	2.950	0.048	0.2451	0.0030	0.80711	1394	12	1413	15	1362	13	1362	13	3.7
11UPC13_91	297	1.641	2.934	0.034	0.2433	0.0031	0.61801	1390.2	8.8	1404	16	1376	12	1376	12	2.0
11UPC13_91	110.4	1.256	3.126	0.042	0.2616	0.0034	0.44741	1440	11	1498	17	1352	15	1352	15	10.8
11UPC13_92	199	2.05	1.958	0.022	0.1870	0.0021	0.74873	1100.5	7.7	1105	11	1097	13	1105	11	0.4
11UPC13_93	79.2	1.688	1.920	0.026	0.1837	0.0018	0.51029	1088.4	8.8	1086.8	9.9	1095	15	1086.8	9.9	0.1
11UPC13_94	87.6	0.87	3.131	0.027	0.2593	0.0022	0.50219	1440.8	6.7	1486	11	1378.4	7.9	1378.4	7.9	7.8
11UPC13_95	111.3	3.043	2.067	0.020	0.1990	0.0015	0.36172	1137.6	6.5	1169.7	8.3	1082.8	9.8	1169.7	8.3	2.8
11UPC13_96	70.9	1.842	2.036	0.026	0.1908	0.0019	0.41968	1126.8	8.8	1127	11	1145	13	1127	11	0.0
11UPC13_97	101.8	1.082	1.769	0.021	0.1682	0.0017	0.28122	1033.7	7.6	1002.1	9.2	1096	16	1002.1	9.2	3.1
11UPC13_98	43	0.854	2.101	0.036	0.1950	0.0024	0.14394	1148	12	1148	13	1147	31	1148	13	0.0
11UPC13_99	122.8	0.685	8.218	0.074	0.4262	0.0040	0.53932	2254.9	8.1	2288	18	2233.7	8.2	2233.7	8.2	2.4
11UPC13_100	79.2	0.7296	2.329	0.023	0.2092	0.0018	0.5399	1220.8	7.1	1224.3	9.4	1213	11	1213	11	0.9
11UPC13_101	189.8	2.056	1.853	0.015	0.1836	0.0018	0.57471	1065.7	5.4	1086.2	9.7	1035.7	8.9	1086.2	9.7	1.9
11UPC13_102	114.1	0.933	3.399	0.037	0.2672	0.0032	0.73534	1503.7	8.5	1526	16	1479.1	9.5	1479.1	9.5	3.2
11UPC13_103	114	0.85	1.815	0.015	0.1778	0.0018	0.61397	1050.6	5.6	1055	9.7	1048.4	9.5	1055	9.7	0.4
11UPC13_104	27.47	0.663	2.176	0.036	0.2047	0.0030	0.53656	1174	12	1200	16	1136	17	1136	16	2.2
11UPC13_105	197.9	2.449	2.291	0.020	0.2098	0.0017	0.63917	1210.9	6.3	1227.6	9.1	1181.7	6.7	1181.7	9.1	1.4
11UPC13_106	66.5	1.39	1.942	0.021	0.1866	0.0019	0.54456	1095.1	7.4	1103	10	1088	13	1103	10	0.7
11UPC13_107	181	2.42	2.260	0.025	0.2091	0.0025	0.5687	1199.5	7.7	1224	13	1162	10	1162	13	2.0
11UPC13_108	54.3	1.223	2.144	0.022	0.1997	0.0022	0.4529	1162.7	7.2	1173	12	1144	13	1173	12	0.9
11UPC13_109	57.8	1.088	1.890	0.024	0.1861	0.0021	0.37409	1077.1	8.6	1100	11	1047	15	1100	11	2.1
11UPC13_110	208.5	1.501	4.654	0.057	0.3114	0.0043	0.53328	1760	10	1747	21	1776	12	1776	12	1.6
11UPC13_111	91.9	3.225	2.909	0.030	0.2437	0.0023	0.56685	1384.6	7.7	1406	12	1340.4	9.9	1340.4	9.9	4.9
11UPC13_112	71.2	0.722	2.072	0.028	0.1950	0.0022	0.49669	1139.9	9.1	1148	12	1131	14	1148	12	0.7
11UPC13_113	140	0.704	5.526	0.045	0.3521	0.0030	0.62064	1904.2	6.9	1944	14	1860.6	5.7	1860.6	5.7	4.5
11UPC13_114	13.9	0.955	2.018	0.046	0.1892	0.0035	0.29296	1125	16	1116	19	1127	23	1116	19	0.8
11UPC13_115	125	1.178	1.959	0.017	0.1869	0.0021	0.51315	1101.2	5.9	1104	11	1085	15	1104	11	0.3
11UPC13_116	130.3	1.758	4.599	0.057	0.2969	0.0048	0.72128	1748	10	1675	24	1840	12	1840	12	9.0

11UPC13_117	81.5	1.0971	2.232	0.022	0.2040	0.0017	0.3912	1190.6	7	1196.8	9.2	1186	11	1196.8	9.2	0.5
11UPC13_118	123.6	0.922	2.323	0.022	0.2148	0.0023	0.33595	1219.9	6.6	1254	12	1176	13	1176	12	2.8
11UPC13_119	119.1	0.3531	2.280	0.240	0.1207	0.0024	0.15901	1180	72	734	14	2080	190	DISC	DISC	64.7
11UPC13_119	56.3	0.831	1.765	0.037	0.1697	0.0030	0.50727	1032	14	1010	17	1085	26	1010	17	2.1
11UPC13_120	197.3	1.541	1.817	0.016	0.1792	0.0017	0.67863	1052.8	6.1	1062.3	9.4	1030.3	9.7	1062.3	9.4	0.9
11UPC13_121	278.6	1.336	2.058	0.022	0.1932	0.0026	0.63099	1134.7	7.2	1139	14	1117	14	1139	14	0.4
11UOK01_1	104.3	2.029	1.979	0.027	0.1856	0.0024	0.47993	1109.9	9.5	1097	13	1120	18	1097	13	1.2
11UOK01_2	60.3	1.353	2.890	0.039	0.2387	0.0026	0.23391	1380	10	1380	13	1379	16	1379	16	0.1
11UOK01_3	24	1.066	1.964	0.061	0.1883	0.0028	0.041312	1100	21	1112	15	1089	43	1112	15	1.1
11UOK01_4	181	1.338	1.741	0.015	0.1739	0.0016	0.29927	1024.4	5.9	1033.4	8.8	1019	12	1033.4	8.8	0.9
11UOK01_5	28	0.744	3.961	0.079	0.2893	0.0040	0.24021	1629	16	1641	21	1633	16	1633	16	0.5
11UOK01_6	212	2.455	4.731	0.043	0.3124	0.0031	0.66432	1772.2	7.6	1752	15	1787.5	9.7	1787.5	9.7	2.0
11UOK01_7	159.6	0.847	2.730	0.044	0.2302	0.0043	0.72215	1336	12	1335	23	1330	16	1330	16	0.4
11UOK01_8	124.8	1.846	5.142	0.075	0.3292	0.0052	0.71392	1842	12	1834	25	1848	13	1848	13	0.8
11UOK01_9	165.3	1.332	2.881	0.028	0.2327	0.0024	0.59771	1376.5	7.4	1349	12	1404	11	1404	11	3.9
11UOK01_10	94.6	1.109	1.803	0.028	0.1766	0.0025	0.29987	1048	11	1048	13	1047	21	1048	13	0.0
11UOK01_11	145.8	0.63	1.879	0.022	0.1826	0.0019	0.34824	1074.1	8.1	1081	10	1066	17	1081	10	0.6
11UOK01_12	146.3	1.475	2.820	0.035	0.2343	0.0028	0.62428	1360	9.3	1356	15	1372	14	1372	14	1.2
11UOK01_13	39.9	1.495	2.048	0.040	0.1902	0.0030	0.12342	1130	13	1122	16	1154	25	1122	16	0.7
11UOK01_14	148.9	1.036	14.080	0.140	0.5371	0.0057	0.77135	2755.2	9.2	2774	25	2745.3	8.4	2745.3	8.4	1.0
11UOK01_15	167.3	1.229	1.514	0.015	0.1532	0.0015	0.44053	935.6	6	918.7	8.3	984	12	918.7	8.3	1.8
11UOK01_16	31.7	1.452	2.460	0.150	0.1825	0.0037	0.49658	1246	38	1080	20	1513	98	1080	20	13.3
11UOK01_17	361	3.89	1.847	0.021	0.1754	0.0020	0.64156	1061.8	7.4	1042	11	1100	11	1042	11	1.9
11UOK01_18	130.8	1.111	4.449	0.044	0.2956	0.0036	0.59859	1721.8	8.4	1671	17	1777	11	1777	11	6.0
11UOK01_19	121.8	1.301	2.624	0.026	0.2284	0.0029	0.45237	1306.8	7.3	1326	15	1274	14	1274	14	4.1
11UOK01_20	71.1	1.465	2.377	0.040	0.2066	0.0027	0.53315	1234	12	1210	14	1264	17	1264	17	4.3
11UOK01_21	86.7	1.769	1.920	0.032	0.1786	0.0030	0.66256	1087	11	1059	16	1138	18	1059	16	2.6
11UOK01_22	14.04	0.596	4.180	0.094	0.2585	0.0052	0.087125	1667	19	1481	27	1900	31	1900	31	22.1

11UOK01_23	75.9	1.357	2.153	0.031	0.1992	0.0026	0.44908	1167	10	1171	14	1158	18	1171	14	0.3
11UOK01_24	26.79	1.396	1.998	0.048	0.1861	0.0034	0.39471	1112	16	1102	18	1158	27	1102	18	0.9
11UOK01_25	27.9	1.041	2.204	0.062	0.1962	0.0043	0.46253	1184	20	1154	23	1222	27	1154	23	2.5
11UOK01_26	95.4	1.307	1.905	0.046	0.1757	0.0039	0.3133	1086	15	1043	21	1171	24	1043	21	4.0
11UOK01_27	169	2.09	1.966	0.032	0.1833	0.0032	0.57822	1103	11	1085	17	1142	19	1085	17	1.6
11UOK01_28	28.37	2.034	1.860	0.038	0.1746	0.0027	0.001327	1067	13	1037	15	1139	27	1037	15	2.8
11UOK01_29	85.6	1.184	1.699	0.028	0.1668	0.0020	0.47668	1009	11	994	11	1049	19	994	11	1.5
11UOK01_30	51.7	0.963	1.915	0.037	0.1793	0.0022	0.18082	1085	13	1063	12	1138	21	1063	12	2.0
11UOK01_31	190	1.309	1.801	0.034	0.1761	0.0025	0.52625	1044	12	1045	14	1059	20	1045	14	0.1
11UOK01_32	337	2.22	1.763	0.034	0.1716	0.0033	0.84903	1032	12	1020	18	1056	11	1020	18	1.2
11UOK01_33	94.9	1.821	1.892	0.036	0.1796	0.0040	0.44143	1077	13	1064	22	1112	23	1064	22	1.2
11UOK01_34	203	1.9	10.400	0.530	0.4470	0.0170	0.97992	2467	50	2383	77	2551	22	2551	22	6.6
11UOK01_36	123.7	1.599	1.690	0.023	0.1682	0.0019	0.36781	1005.1	8.8	1002	10	1025	17	1002	10	0.3
11UOK01_37	74.3	1.685	1.988	0.029	0.1882	0.0030	0.37289	1110.5	9.9	1111	16	1102	19	1111	16	0.0
11UOK01_38	222.4	10.6	1.859	0.021	0.1768	0.0017	0.48819	1067.1	7.8	1049.4	9.3	1105	10	1049.4	9.3	1.7
11UOK01_39	82	1.33	1.821	0.038	0.1828	0.0030	0.12902	1052	14	1082	16	1004	27	1082	16	2.9
11UOK01_40	96.4	0.895	1.938	0.024	0.1858	0.0017	0.44454	1095.8	8.8	1098.2	9.4	1083	17	1098.2	9.4	0.2
11UOK01_41	102.6	0.922	1.993	0.024	0.1892	0.0021	0.32286	1112.6	8.1	1117	11	1108	17	1117	11	0.4
11UOK01_42	62.3	0.588	12.590	0.120	0.5004	0.0051	0.46651	2649	9.2	2615	22	2688	10	2688	10	2.7
11UOK01_43	278	0.943	2.739	0.033	0.2272	0.0021	0.17829	1338.5	9	1323	12	1371	9.2	1371	9.2	3.5
11UOK01_44	46.2	1.613	2.429	0.040	0.2144	0.0029	0.085544	1251	12	1254	16	1243	22	1243	22	0.9
11UOK01_45	113.9	6.36	1.733	0.021	0.1658	0.0018	0.36574	1021.2	7.8	989	10	1108	17	989	10	3.2
11UOK01_46	199	2.59	1.843	0.022	0.1739	0.0023	0.58254	1060.4	7.8	1033	12	1101	13	1033	12	2.6
11UOK01_47	65.3	1.225	3.897	0.041	0.2784	0.0024	0.17886	1612.3	8.5	1584	12	1638	14	1638	14	3.3
11UOK01_48	8.3	0.736	2.663	0.099	0.2204	0.0066	0.084925	1318	28	1282	35	1407	59	1407	59	8.9
11UOK01_49	269.2	2.951	1.767	0.021	0.1708	0.0023	0.57836	1033.8	7.9	1016	13	1065	13	1016	13	1.7
11UOK01_50	74	1.58	2.519	0.052	0.2092	0.0045	0.40458	1279	15	1224	24	1369	30	1369	30	10.6
11UOK01_51	65.4	0.7087	13.010	0.110	0.5146	0.0058	0.48018	2680.4	8.4	2675	25	2686.9	8.2	2686.9	8.2	0.4
11UOK01_53	128	0.861	1.781	0.024	0.1772	0.0021	0.58629	1037.7	8.7	1051	11	1042	14	1051	11	1.3
11UOK01_54	82.3	1.362	3.327	0.053	0.2652	0.0034	0.15808	1486	12	1516	17	1454	20	1454	20	4.3

11UOK01_55	222	2	1.867	0.027	0.1833	0.0027	0.48444	1069.7	9.5	1085	15	1050	18	1085	15	1.4
11UOK01_56	188	0.801	2.931	0.026	0.2435	0.0019	0.27567	1389.5	6.6	1404.9	9.9	1370	12	1370	12	2.5
11UOK01_57	85.5	0.5075	2.850	0.030	0.2346	0.0024	0.34332	1370.2	8	1358	12	1390	14	1390	14	2.3
11UOK01_58	111	1.415	3.786	0.087	0.2265	0.0026	0.53931	1587	18	1316	14	1981	34	DISC	DISC	33.6
11UOK01_59	111.4	1.521	4.227	0.049	0.3048	0.0031	0.61907	1678.3	9.6	1715	15	1640	12	1640	12	4.6
11UOK01_60	123.2	1.474	2.053	0.026	0.1916	0.0017	0.30325	1134.6	8.7	1129.8	9.2	1134	11	1129.8	9.2	0.4
11UOK01_61	341	1.908	4.560	0.110	0.3080	0.0093	0.82271	1740	19	1729	45	1744	26	1744	26	0.9
11UOK01_62	65	0.4726	2.035	0.032	0.1920	0.0021	0.31988	1126	11	1134	12	1116	19	1134	12	0.7
11UOK01_63	37.9	1.635	2.262	0.055	0.2035	0.0039	0.49239	1198	17	1193	21	1210	29	1193	21	0.4
11UOK01_64	129.9	1.164	2.128	0.020	0.1974	0.0016	0.043214	1157.5	6.6	1161	8.6	1144	14	1161	8.6	0.3
11UOK01_65	101.6	1.076	2.200	0.036	0.2054	0.0028	0.37741	1181	11	1204	15	1162	20	1162	15	1.9
11UOK01_66	52.4	0.845	2.078	0.045	0.1961	0.0038	0.5153	1143	15	1154	21	1114	21	1154	21	1.0
11UOK01_67	148	1.016	3.019	0.029	0.2399	0.0020	0.2878	1413.1	7.2	1388	10	1456	14	1456	14	4.7
11UOK01_69	285	1.926	3.077	0.037	0.2509	0.0031	0.77882	1424	10	1440	17	1407	13	1407	13	2.3
11UOK01_71	21.6	1.514	1.911	0.051	0.1761	0.0037	0.21242	1084	18	1048	20	1167	37	1048	20	3.3
11UOK01_74	109.1	1.306	1.954	0.042	0.1887	0.0025	0.51492	1099	14	1114	14	1072	21	1114	14	1.4
11UOK01_75	105.8	2.005	2.335	0.035	0.2097	0.0018	0.13079	1225	10	1227.3	9.6	1221	20	1221	20	0.5
11UOK01_76	148	2.57	4.844	0.041	0.3226	0.0029	0.45574	1792	7.1	1802	14	1785	11	1785	11	1.0
11UOK01_77	77.1	0.6098	2.422	0.045	0.2001	0.0028	0.48845	1249	13	1176	15	1375	19	1176	15	5.8
11UOK01_78	105.6	1.525	1.863	0.023	0.1780	0.0022	0.42593	1067.3	8.2	1056	12	1084	17	1056	12	1.1
11UOK01_79	17.28	1.84	2.005	0.057	0.1850	0.0042	0.22376	1116	20	1093	23	1156	37	1093	23	2.1
11UOK01_80	41.6	0.3416	1.951	0.039	0.1801	0.0026	0.37944	1097	13	1067	14	1161	29	1067	14	2.7
11UOK01_81	13.37	1.045	1.857	0.056	0.1781	0.0039	0.071463	1065	20	1056	21	1083	49	1056	21	0.8
11UOK01_82	375	1.762	1.744	0.014	0.1737	0.0011	0.6078	1024.6	5.3	1032.3	6	1008.8	8.4	1032.3	6	0.8
11UOK01_84	40.3	0.914	1.942	0.035	0.1880	0.0029	0.23538	1096	12	1110	16	1086	27	1110	16	1.3
11UOK01_85	132	1.42	3.166	0.046	0.2547	0.0031	0.020342	1449	11	1462	16	1432	21	1432	21	2.1
11UOK01_86	78.7	1.052	2.834	0.046	0.2330	0.0042	0.46081	1363	12	1349	22	1385	24	1385	24	2.6
11UOK01_87	16.2	0.513	1.978	0.057	0.1855	0.0039	0.012487	1105	19	1099	21	1166	37	1099	21	0.5
11UOK01_88	65	1.63	2.164	0.051	0.1980	0.0041	0.58316	1167	16	1164	22	1191	23	1164	22	0.3
11UOK01_89	59.9	1.466	1.909	0.040	0.1794	0.0031	0.22189	1082	14	1063	17	1141	27	1063	17	1.8

11UOK01_90	187	0.706	3.424	0.053	0.2649	0.0025	0.30803	1509	12	1515	13	1506	19	1506	19	0.6
11UOK01_91	117.6	0.878	1.945	0.036	0.1823	0.0034	0.72834	1096	12	1079	19	1121	16	1079	19	1.6
11UOK01_92	83.1	0.591	1.586	0.030	0.1595	0.0024	0.31733	964	12	956	14	974	27	956	14	0.8
11UOK01_93	127.8	1.323	2.054	0.032	0.1963	0.0028	0.54718	1134	11	1157	15	1111	17	1157	15	2.0
11UOK01_94	185.5	1.683	4.281	0.043	0.2985	0.0030	0.33811	1689.2	8.3	1684	15	1704	14	1704	14	1.2
11UOK01_95	62.6	0.988	1.971	0.030	0.1857	0.0021	0.13462	1109	10	1098	11	1130	18	1098	11	1.0
11UOK01_96	112	1.27	1.974	0.025	0.1850	0.0015	0.32887	1106.1	8.4	1094.2	8.2	1117	15	1094.2	8.2	1.1
11UOK01_97	90.4	1.324	2.702	0.043	0.2241	0.0032	0.5045	1328	12	1303	17	1369	20	1369	20	4.8
11UOK01_99	146.3	0.806	1.768	0.025	0.1672	0.0017	0.49677	1035.5	9.1	996.5	9.4	1129	16	996.5	9.4	3.8
11UOK01_100	67	1.98	2.177	0.063	0.1962	0.0024	0.25356	1167	18	1155	13	1189	44	1155	13	1.0
11UOK01_101	69.6	1.067	4.160	0.058	0.3018	0.0038	0.44927	1665	11	1700	19	1638	13	1638	13	3.8
11UOK01_102	108	1.359	2.863	0.044	0.2413	0.0031	0.60035	1371	12	1393	16	1355	14	1355	14	2.8
11UOK01_103	233.9	2.004	1.981	0.018	0.1889	0.0013	0.39108	1109.5	6	1115.1	7.3	1095.8	7.7	1115.1	7.3	0.5
11UOK01_104	149.1	0.579	2.029	0.022	0.1904	0.0019	0.068433	1126	7.2	1124	10	1129	17	1124	10	0.2
11UOK01_105	86.2	1.064	2.445	0.036	0.2151	0.0028	0.28988	1256	11	1255	15	1258	19	1258	19	0.2
11UOK01_106	42.1	0.859	4.203	0.099	0.2818	0.0054	0.68698	1675	19	1603	28	1790	15	1790	15	10.4
11UOK01_107	103.2	1.517	3.156	0.041	0.2490	0.0027	0.45028	1446.8	9.8	1435	14	1476	13	1476	13	2.8
11UOK01_108	29.11	1.387	2.188	0.070	0.1939	0.0043	0.37608	1173	22	1142	23	1268	34	1142	23	2.6
11UOK01_109	162.1	1.313	4.653	0.049	0.3146	0.0035	0.55546	1758.1	8.7	1763	17	1749	11	1749	11	0.8
11UOK01_110	176.5	1.529	2.938	0.040	0.2384	0.0027	0.47851	1391	10	1378	14	1414	14	1414	14	2.5
11UOK01_111	122.5	1.303	2.307	0.035	0.2093	0.0034	0.5096	1219	11	1225	18	1221	18	1221	18	0.3
11UOK01_112	69.5	1.609	1.851	0.034	0.1754	0.0033	0.47512	1062	12	1041	18	1096	27	1041	18	2.0
11UOK01_113	235	1.971	1.979	0.019	0.1891	0.0023	0.47792	1107.9	6.5	1118	13	1088	15	1118	13	0.9
11UOK01_115	65.2	1.496	2.059	0.034	0.1900	0.0025	0.17707	1134	11	1121	14	1169	23	1121	14	1.1
11UOK01_116	38.7	1.483	2.243	0.041	0.2010	0.0029	0.38778	1197	13	1182	15	1221	22	1182	15	1.3
11UOK01_117	49.7	0.4878	2.121	0.044	0.2008	0.0029	0.35829	1154	14	1179	16	1094	27	1179	16	2.2
11UOK01_118	77.9	1.121	2.777	0.073	0.2346	0.0067	0.63116	1351	19	1358	35	1352	32	1352	32	0.4
11UOK01_119	88.1	1.226	3.118	0.042	0.2519	0.0032	0.45778	1438	10	1448	17	1436	18	1436	18	0.8
11UOK01_120	69.1	0.78	1.752	0.033	0.1718	0.0028	0.42369	1028	12	1022	15	1035	22	1022	15	0.6
11UOK01_121	279	1.337	2.706	0.033	0.2317	0.0030	0.58752	1329.4	9.1	1343	16	1310	15	1310	15	2.5

11UOK04_1	40.7	1.126	2.047	0.032	0.1930	0.0029	0.35387	1132	11	1137	16	1114	21	1137	16	0.4
11UOK04_2	55.8	0.6186	4.821	0.040	0.3296	0.0026	0.34064	1788.1	6.9	1838	13	1731	10	1731	10	6.2
11UOK04_3	53.2	0.397	3.274	0.036	0.2656	0.0031	0.28545	1474.4	8.6	1518	16	1419	17	1419	17	7.0
11UOK04_4	61.6	1.472	1.999	0.025	0.1904	0.0024	0.28291	1116	8.1	1123	13	1089	21	1123	13	0.6
11UOK04_5	56.7	1.424	2.160	0.027	0.2004	0.0023	0.51536	1167.7	8.7	1177	12	1149	14	1177	12	0.8
11UOK04_6	118	0.699	1.961	0.020	0.1755	0.0020	0.47933	1103.6	6.7	1042	11	1222	11	1042	11	5.6
11UOK04_7	71.7	1.003	3.444	0.036	0.2712	0.0027	0.12884	1513.9	8.3	1547	14	1466	12	1466	12	5.5
11UOK04_8	39.5	0.86	3.335	0.040	0.2665	0.0026	0.28888	1488.4	9.4	1523	13	1449	15	1449	15	5.1
11UOK04_9	23.75	0.861	2.743	0.043	0.2323	0.0036	0.27831	1341	11	1346	19	1338	22	1338	22	0.6
11UOK04_10	110.2	0.7087	4.988	0.040	0.3234	0.0031	0.6357	1817.7	6.7	1806	15	1825.3	7.2	1825.3	7.2	1.1
11UOK04_11	54.6	1.918	2.028	0.030	0.1928	0.0022	0.1346	1124	10	1138	12	1110	18	1138	12	1.2
11UOK04_12	57.8	1.034	2.004	0.024	0.1929	0.0022	0.18207	1116.4	8.2	1137	12	1083	19	1137	12	1.8
11UOK04_13	272.1	2.087	2.288	0.021	0.2123	0.0019	0.76089	1209.1	6.4	1241	10	1152.9	8.4	1152.9	10	2.6
11UOK04_14	23.83	0.6499	2.088	0.034	0.1964	0.0030	0.3054	1144	11	1157	17	1134	21	1157	17	1.1
11UOK04_16	34.1	1.629	3.149	0.038	0.2514	0.0033	0.44738	1443.9	9.3	1445	17	1439	17	1439	17	0.4
11UOK04_17	74.5	1.039	1.945	0.028	0.1878	0.0026	0.4991	1097.3	9.8	1109	14	1080	18	1109	14	1.1
11UOK04_18	119.2	1.566	2.026	0.025	0.1906	0.0021	0.6657	1125	8.5	1124	11	1131	12	1124	11	0.1
11UOK04_19	112.7	0.969	3.239	0.029	0.2605	0.0024	0.63635	1468	6.7	1492	12	1436.5	9.5	1436.5	9.5	3.9
11UOK04_20	169	1.453	1.940	0.019	0.1878	0.0020	0.46583	1094.7	6.5	1109	11	1072	12	1109	11	1.3
11UOK04_21	57.5	1.092	1.965	0.035	0.1867	0.0031	0.59974	1102	12	1103	17	1106	18	1103	17	0.1
11UOK04_22	73.3	2.33	12.830	0.150	0.5101	0.0060	0.82444	2668	11	2656	26	2683.3	8.7	2683.3	8.7	1.0
11UOK04_23	133	5.65	2.226	0.020	0.2060	0.0019	0.48936	1188.9	6.3	1207	10	1167.4	9.7	1167.4	10	1.5
11UOK04_24	56	0.9792	2.230	0.027	0.2054	0.0020	0.47328	1189.8	8.4	1204	11	1170	12	1170	11	1.2
11UOK04_25	49.8	1.602	1.966	0.026	0.1904	0.0022	0.21132	1103.2	8.7	1123	12	1070	20	1123	12	1.8
11UOK04_26	77.5	1.133	3.017	0.028	0.2508	0.0031	0.42561	1412.3	7.1	1442	16	1379	14	1379	14	4.6
11UOK04_27	113.8	1.912	2.223	0.027	0.2052	0.0025	0.65046	1187.7	8.5	1203	13	1163	12	1163	13	1.3
11UOK04_28	86	1.754	2.121	0.033	0.1954	0.0022	0.41675	1156	11	1151	12	1179	23	1151	12	0.4
11UOK04_29	102.9	2.71	2.095	0.023	0.1974	0.0024	0.50239	1146.6	7.7	1161	13	1123	12	1161	13	1.3

11UOK04_30	130	1.282	2.984	0.032	0.2488	0.0027	0.42529	1404.4	8	1432	14	1364	13	1364	13	5.0
11UOK04_31	38.2	0.7699	1.896	0.036	0.1856	0.0026	0.31342	1079	13	1097	14	1056	16	1097	14	1.7
11UOK04_32	106.4	0.863	1.832	0.030	0.1714	0.0027	0.41157	1057	11	1020	15	1170	22	1020	15	3.5
11UOK04_33	341.8	0.94	1.710	0.017	0.1621	0.0020	0.64199	1011.9	6.4	968	11	1114	13	968	11	4.3
11UOK04_34	224	0.931	1.903	0.024	0.1867	0.0025	0.81287	1081.3	8.4	1103	14	1047	11	1103	14	2.0
11UOK04_35	20.41	0.825	2.791	0.057	0.2361	0.0044	0.71895	1351	15	1366	23	1329	28	1329	28	2.8
11UOK04_36	131.3	1.742	1.826	0.019	0.1815	0.0021	0.45435	1055.2	6.9	1075	12	1021	15	1075	12	1.9
11UOK04_37	122.4	0.36	1.738	0.026	0.1660	0.0018	0.73	1021.9	9.4	990	10	1094	10	990	10	3.1
11UOK04_38	86.4	1.122	1.915	0.019	0.1863	0.0019	0.54314	1086.8	6.6	1101	10	1074	12	1101	10	1.3
11UOK04_39	12.64	1.279	3.340	0.160	0.2561	0.0054	0.18498	1483	37	1469	28	1529	85	1529	85	3.9
11UOK04_40	35.4	0.902	1.998	0.034	0.1927	0.0028	0.54791	1118	12	1136	15	1097	21	1136	15	1.6
11UOK04_41	137.6	2.109	2.336	0.018	0.2166	0.0019	0.38035	1223	5.6	1264	10	1152	12	1152	10	3.4
11UOK04_42	44.46	0.935	2.232	0.028	0.2068	0.0025	0.40232	1191.6	8.8	1211	13	1148	17	1148	13	1.6
11UOK04_43	56.7	0.7012	4.346	0.047	0.3122	0.0034	0.61697	1702.5	8.8	1751	17	1656	12	1656	12	5.7
11UOK04_46	210	3.406	1.929	0.023	0.1852	0.0022	0.51127	1090.7	8	1095	12	1078	12	1095	12	0.4
11UOK04_47	59.9	0.904	2.842	0.033	0.2344	0.0026	0.50888	1367.1	8.6	1357	14	1390	15	1390	15	2.4
11UOK04_48	68.4	1.327	2.024	0.024	0.1930	0.0024	0.26792	1123	7.9	1138	13	1100	21	1138	13	1.3
11UOK04_49	123.3	1.182	2.022	0.034	0.1963	0.0035	0.25682	1122	12	1155	19	1064	24	1155	19	2.9
11UOK04_50	105.2	0.686	21.310	0.340	0.6108	0.0080	0.61126	3153	15	3072	32	3198	16	3198	16	3.9
11UOK04_51	140.7	1.137	2.563	0.021	0.2212	0.0023	0.46425	1289.7	6.1	1289	12	1303	12	1303	12	1.1
11UOK04_52	7.5	1.34	2.726	0.075	0.2387	0.0054	0.12414	1340	20	1379	28	1308	41	1308	41	5.4
11UOK04_53	89.33	2.409	2.930	0.024	0.2416	0.0021	0.48472	1389.3	6.3	1396	11	1382	10	1382	10	1.0
11UOK04_54	133.9	0.853	1.968	0.025	0.1680	0.0020	0.30846	1106.1	8.4	1001	11	1317	25	1001	11	9.5
11UOK04_55	70	0.6337	1.973	0.022	0.1923	0.0019	0.33774	1105.8	7.6	1134	10	1065	17	1134	10	2.6
11UOK04_56	280	2.47	3.299	0.039	0.2647	0.0036	0.61228	1481.7	9.4	1513	18	1433	15	1433	15	5.6
11UOK04_57	76.4	2.182	1.832	0.020	0.1783	0.0020	0.44402	1056.5	7.1	1057	11	1044	13	1057	11	0.0
11UOK04_58	84.7	1.277	3.394	0.047	0.2687	0.0034	0.70385	1503	11	1534	18	1470	13	1470	13	4.4
11UOK04_59	235	2.26	2.018	0.017	0.1918	0.0017	0.42559	1121.4	5.7	1131.1	9.3	1100	11	1131.1	9.3	0.9
11UOK04_60	183.2	1.246	2.017	0.026	0.1934	0.0028	0.65562	1121.7	9.1	1139	15	1090	18	1139	15	1.5
11UOK04_61	72.06	0.89	1.995	0.023	0.1919	0.0020	0.47544	1114.2	8.1	1132	11	1082	13	1132	11	1.6

11UOK04_62	123	1.329	2.602	0.025	0.2267	0.0021	0.48678	1300.6	7	1317	11	1273	10	1273	10	3.5
11UOK04_63	134	1.318	3.045	0.030	0.2510	0.0031	0.67791	1418.4	7.6	1447	16	1381.1	9.7	1381.1	9.7	4.8
11UOK04_64	120.4	1.431	3.052	0.031	0.2538	0.0027	0.5471	1421.4	7.5	1458	14	1364	13	1364	13	6.9
11UOK04_65	28.83	0.905	2.202	0.038	0.2023	0.0031	0.23637	1184	12	1187	17	1167	21	1187	17	0.3
11UOK04_66	3.517	0.5	1.704	0.082	0.1421	0.0051	0.0016122	1006	30	855	29	1384	82	855	29	15.0
11UOK04_67	83.4	0.77	1.998	0.045	0.1922	0.0043	0.62919	1114	15	1133	23	1080	18	1133	23	1.7
11UOK04_68	43.2	0.811	1.949	0.029	0.1886	0.0023	0.29573	1098	10	1115	13	1079	21	1115	13	1.5
11UOK04_69	90.2	0.624	1.926	0.021	0.1876	0.0022	0.49144	1089.7	7.3	1108	12	1049	15	1108	12	1.7
11UOK04_70	159.4	1.274	3.443	0.029	0.2707	0.0029	0.56582	1513.9	6.6	1544	15	1478	11	1478	11	4.5
11UOK04_71	9.6	0.365	1.852	0.058	0.1741	0.0040	0.18123	1064	21	1034	22	1122	41	1034	22	2.8
11UOK04_72	91.7	2.043	1.697	0.019	0.1684	0.0016	0.23563	1008.7	7.3	1003.2	8.8	1021	16	1003.2	8.8	0.5
11UOK04_73	109.6	1.381	1.876	0.019	0.1824	0.0019	0.46445	1072.3	6.7	1080	11	1073	16	1080	11	0.7
11UOK04_74	132	0.826	4.966	0.047	0.3293	0.0040	0.76793	1814	8.3	1840	19	1798.2	9.6	1798.2	9.6	2.3
11UOK04_75	26.62	0.789	1.816	0.029	0.1777	0.0027	0.34965	1050	10	1054	15	1061	22	1054	15	0.4
11UOK04_76	61.1	0.846	13.530	0.180	0.5311	0.0067	0.73118	2717	13	2745	28	2711	10	2711	10	1.3
11UOK04_77	200.8	4.375	2.310	0.030	0.2060	0.0036	0.74191	1215.1	9.3	1208	19	1212	13	1212	13	0.3
11UOK04_78	229.9	4.28	1.734	0.021	0.1712	0.0016	0.57874	1020.6	7.6	1018.6	8.9	1039	12	1018.6	8.9	0.2
11UOK04_79	135	1.678	2.149	0.025	0.2002	0.0022	0.65046	1165.2	8	1176	12	1149.7	9.6	1176	12	0.9
11UOK04_80	37.9	0.463	2.923	0.063	0.2467	0.0042	0.45673	1387	16	1421	22	1356	20	1356	20	4.8
11UOK04_81	48.5	0.6988	2.061	0.028	0.1912	0.0021	0.3045	1135.1	9.3	1128	11	1131	20	1128	11	0.6
11UOK04_82	83.4	1.798	1.865	0.034	0.1755	0.0033	0.47075	1068	12	1042	18	1122	20	1042	18	2.4
11UOK04_82	70.48	1.929	1.952	0.025	0.1890	0.0022	0.19639	1098.6	8.5	1116	12	1066	17	1116	12	1.6
11UOK04_83	106.1	0.915	2.000	0.022	0.1923	0.0021	0.52878	1115	7.5	1134	11	1091	13	1134	11	1.7
11UOK04_84	127.5	2.215	1.915	0.022	0.1889	0.0026	0.60275	1085.9	7.8	1115	14	1018	14	1115	14	2.7
11UOK04_85	121.8	1.548	2.282	0.025	0.2111	0.0026	0.58092	1206.2	7.6	1234	14	1161	12	1161	14	2.3
11UOK04_86	101	1.128	3.429	0.038	0.2695	0.0024	0.62246	1512.5	8.4	1538	12	1480	11	1480	11	3.9
11UOK04_87	206	1.229	1.957	0.017	0.1887	0.0018	0.38583	1100.6	5.8	1115.7	9.7	1082	12	1115.7	9.7	1.4
11UOK04_88	119.5	0.796	3.225	0.029	0.2592	0.0029	0.43859	1463.7	6.8	1485	15	1444	15	1444	15	2.8
11UOK04_89	196	1.115	2.227	0.018	0.2016	0.0019	0.56814	1190.9	5.7	1184	10	1203.8	8.2	1184	10	0.6
11UOK04_90	50	1.82	1.685	0.029	0.1653	0.0018	0.40081	1003	11	986	10	1028	17	986	10	1.7

11UOK04_91	136.5	2.161	1.949	0.018	0.1877	0.0021	0.58851	1097.7	6.1	1109	11	1081	10	1109	11	1.0
11UOK04_92	90	1.146	1.895	0.024	0.1867	0.0023	0.46118	1080	8.6	1103	12	1053	15	1103	12	2.1
11UOK04_93	62	1.413	1.895	0.023	0.1868	0.0023	0.50928	1078.8	8.2	1104	12	1047	14	1104	12	2.3
11UOK04_94	139	3.28	1.568	0.026	0.1580	0.0025	0.5933	958	10	945	14	993	24	945	14	1.4
11UOK04_95	56.6	1.189	3.270	0.035	0.2596	0.0034	0.40203	1473.4	8.3	1488	18	1459	16	1459	16	2.0
11UOK04_96	480	1.342	2.208	0.049	0.1603	0.0036	0.66316	1183	15	958	20	1610	25	958	20	19.0
11UOK04_96	125.9	1.466	3.230	0.054	0.2593	0.0046	0.7304	1467	14	1486	24	1450	16	1450	16	2.5
11UOK04_97	56.4	0.825	2.886	0.040	0.2394	0.0038	0.58959	1377	11	1383	20	1366	14	1366	14	1.2
11UOK04_98	24.54	1.426	1.995	0.040	0.1846	0.0025	0.38017	1114	14	1092	14	1169	23	1092	14	2.0
11UOK04_99	50.6	0.853	1.910	0.029	0.1831	0.0024	0.32277	1083	10	1083	13	1075	18	1083	13	0.0
11UOK04_100	40.8	1.485	2.768	0.039	0.2356	0.0027	0.41555	1346	10	1364	14	1346	17	1346	17	1.3
11UOK04_101	170	1.946	2.162	0.022	0.2028	0.0024	0.38962	1168.7	7.2	1190	13	1135	13	1190	13	1.8
11UOK04_102	208.6	2.479	2.035	0.018	0.1939	0.0017	0.41942	1127	6	1142.5	9	1105	10	1142.5	9	1.4
11UOK04_103	99.4	0.6071	13.130	0.120	0.5343	0.0064	0.63484	2688.6	8.5	2759	27	2628	9.9	2628	9.9	5.0
11UOK04_104	323.3	1.226	1.635	0.020	0.1588	0.0019	0.68785	983.9	8	950	11	1052	13	950	11	3.4
11UOK04_105	49.2	0.207	1.434	0.047	0.1348	0.0031	0.529	902	19	815	17	1150	34	815	17	9.6
11UOK04_105	38.4	1.023	2.136	0.040	0.1959	0.0028	0.38353	1162	13	1153	15	1196	29	1153	15	0.8
11UOK04_106	69.2	1.569	1.901	0.027	0.1826	0.0022	0.496	1080.5	9.6	1081	12	1082	16	1081	12	0.0
11UOK04_107	297	2.2	1.899	0.021	0.1831	0.0021	0.73585	1080.2	7.3	1084	11	1084	11	1084	11	0.4
11UOK04_108	3.81	1.067	1.844	0.091	0.1728	0.0057	0.028162	1056	33	1030	31	1155	71	1030	31	2.5
11UOK04_109	27.6	0.896	2.240	0.130	0.1993	0.0031	0.69983	1175	21	1174	16	1188	37	1174	16	0.1
11UOK04_110	9.99	1.147	2.630	0.150	0.1738	0.0041	0.36202	1302	44	1032	22	1824	76	1032	22	20.7
11UOK04_111	69	1.596	1.927	0.020	0.1849	0.0020	0.23227	1090.2	6.9	1093	11	1090	15	1093	11	0.3
11UOK04_112	322	1.827	1.912	0.017	0.1787	0.0018	0.50824	1085.1	6	1059.7	9.8	1134	11	1059.7	9.8	2.3
11UOK04_113	170.8	2.107	1.803	0.014	0.1770	0.0014	0.40131	1046.2	5.3	1050.5	7.8	1043	10	1050.5	7.8	0.4
11UOK04_114	128.1	1.418	2.578	0.070	0.2142	0.0062	0.81828	1293	19	1251	33	1408	26	1408	26	11.2
11UOK04_115	174	2.61	2.226	0.018	0.2055	0.0018	0.42866	1189.1	5.8	1204.7	9.7	1172	10	1172	9.7	1.3
11UOK04_116	69.8	1.389	3.289	0.039	0.2594	0.0038	0.72064	1477.8	9.3	1489	19	1461	13	1461	13	1.9
11UOK04_117	50.7	1.272	3.376	0.041	0.2698	0.0031	0.55716	1497.9	9.4	1539	16	1446	12	1446	12	6.4
11UOK04_118	17.13	0.894	2.055	0.039	0.1914	0.0034	0.41186	1136	13	1128	18	1164	23	1128	18	0.7

11UOK04_119	74.6	1.607	3.320	0.032	0.2608	0.0028	0.47829	1486.2	7.4	1495	14	1479	12	1479	12	1.1
11UOK04_121	144	1.508	2.274	0.024	0.2082	0.0024	0.54471	1203.8	7.4	1219	13	1176	14	1176	13	1.3
11UOK05_1	5.42	1.128	1.833	0.052	0.1810	0.0040	0.35374	1059	19	1072	22	1079	31	1072	22	1.2
11UOK05_2	112	1.75	5.231	0.073	0.3338	0.0044	0.90533	1856	12	1856	21	1856.8	5.1	1856.8	5.1	0.0
11UOK05_3	108.6	0.798	8.580	0.140	0.3541	0.0049	0.94345	2293	15	1954	23	2619.2	5.5	2619.2	5.5	25.4
11UOK05_4	12.31	1.1	1.569	0.029	0.1513	0.0018	0.21101	958	11	908	10	1065	22	908	10	5.2
11UOK05_5	31.2	1.109	2.431	0.024	0.2149	0.0021	0.41366	1254.2	7.3	1255	11	1254	13	1254	13	0.1
11UOK05_6	72.4	1.752	1.825	0.015	0.1767	0.0014	0.6494	1054.9	5.4	1049.1	7.6	1078.5	8.6	1049.1	7.6	0.5
11UOK05_7	30.24	1.243	1.759	0.021	0.1760	0.0015	0.28499	1029.8	7.8	1044.8	8.4	1011	15	1044.8	8.4	1.5
11UOK05_8	22.77	0.75	2.273	0.029	0.2035	0.0021	0.31703	1203.2	8.9	1194	11	1225	16	1194	11	0.8
11UOK05_9	43	1.072	2.824	0.031	0.2359	0.0024	0.58979	1361.2	8.1	1365	13	1349	12	1349	12	1.2
11UOK05_10	214	2.2	3.217	0.053	0.2552	0.0044	0.96532	1457	14	1465	23	1452.6	6.1	1452.6	6.1	0.9
11UOK05_11	129.7	0.6086	4.938	0.031	0.3208	0.0020	0.70962	1808.5	5.2	1793.4	9.9	1832.6	6.3	1832.6	6.3	2.1
11UOK05_12	35.8	0.573	2.028	0.022	0.1909	0.0020	0.56572	1124.4	7.4	1126	11	1131	13	1126	11	0.1
11UOK05_13	43.3	1.316	1.809	0.021	0.1761	0.0015	0.54843	1048.2	7.6	1045.4	8.1	1058	14	1045.4	8.1	0.3
11UOK05_14	139.6	0.925	1.862	0.017	0.1806	0.0015	0.82407	1067.5	6.1	1070.3	8.3	1074.1	6.6	1070.3	8.3	0.3
11UOK05_15	44.6	2.97	13.790	0.100	0.5320	0.0049	0.83001	2734.6	7.2	2749	21	2730.5	5.1	2730.5	5.1	0.7
11UOK05_16	25.4	0.8816	1.938	0.030	0.1866	0.0015	0.14803	1093	10	1102.6	8.4	1079	19	1102.6	8.4	0.9
11UOK05_17	60.3	1.643	1.551	0.014	0.1587	0.0011	0.40859	950.5	5.5	949.2	6.4	968	10	949.2	6.4	0.1
11UOK05_18	138	1.023	2.987	0.020	0.2436	0.0016	0.62848	1404.6	5.1	1405	8.3	1398.9	6.1	1398.9	6.1	0.4
11UOK05_19	39.6	1.463	2.689	0.028	0.2288	0.0017	0.67552	1325.9	7.9	1329.7	9.2	1332	11	1332	11	0.2
11UOK05_20	200	4.65	2.743	0.027	0.2238	0.0019	0.80361	1339.7	7.2	1302	10	1399	5.9	1399	5.9	6.9
11UOK05_21	32	2.104	1.923	0.022	0.1820	0.0015	0.24965	1090.2	7.3	1077.6	8.1	1121	14	1077.6	8.1	1.2
11UOK05_22	37.8	0.88	1.809	0.019	0.1745	0.0017	0.32609	1048.4	6.7	1036.8	9.6	1082	16	1036.8	9.6	1.1
11UOK05_23	73.7	3.02	4.515	0.056	0.3037	0.0040	0.88097	1734	11	1709	20	1762.5	6.3	1762.5	6.3	3.0
11UOK05_24	66.6	1.766	2.859	0.026	0.2359	0.0019	0.80425	1370.6	7	1365.3	9.8	1382.9	7.7	1382.9	7.7	1.3
11UOK05_25	57.7	1.351	1.901	0.017	0.1821	0.0013	0.34601	1081.8	5.6	1078.2	7.1	1091	11	1078.2	7.1	0.3
11UOK05_26	40.2	1.736	12.800	0.120	0.5054	0.0046	0.95525	2662.9	9.2	2636	20	2687.8	4.8	2687.8	4.8	1.9

11UOK05_27	64.1	1.7	1.827	0.019	0.1792	0.0015	0.78232	1054.6	6.9	1062.7	8.2	1049	20	1062.7	8.2	0.8
11UOK05_28	130	1.351	2.344	0.020	0.2069	0.0019	0.67643	1225.4	6	1212	10	1255.1	9.2	1255.1	9.2	3.4
11UOK05_29	33	1.539	1.997	0.022	0.1876	0.0020	0.33306	1113.9	7.4	1108	11	1126	15	1108	11	0.5
11UOK05_30	33.3	1.264	2.072	0.020	0.1890	0.0018	0.31585	1139.3	6.6	1115.9	9.9	1198	15	1115.9	9.9	2.1
11UOK05_31	93.8	1.06	2.577	0.017	0.2177	0.0015	0.40099	1293.9	4.9	1269.6	7.9	1331.5	8.7	1331.5	8.7	4.6
11UOK05_32	70.9	0.609	1.966	0.015	0.1870	0.0015	0.55197	1104.5	5	1105	7.9	1108.6	8.2	1105	7.9	0.0
11UOK05_33	85.5	0.8569	2.812	0.021	0.2344	0.0019	0.45383	1358.4	5.7	1357	10	1365.8	9.6	1365.8	9.6	0.6
11UOK05_34	90.6	0.732	5.984	0.036	0.3513	0.0024	0.46208	1973.9	5.1	1942	11	2009.9	9.2	2009.9	9.2	3.4
11UOK05_35	25	1.006	2.084	0.027	0.1873	0.0023	0.35681	1142.9	8.9	1107	13	1219	18	1107	13	3.1
11UOK05_36	56.5	0.802	1.795	0.017	0.1681	0.0014	0.39949	1043.1	6.3	1001.6	7.8	1128.6	9.2	1001.6	7.8	4.0
11UOK05_37	84.9	1.49	4.054	0.030	0.2893	0.0020	0.56962	1645.6	6.1	1638	10	1662.5	8.5	1662.5	8.5	1.5
11UOK05_38	84.8	0.929	1.815	0.017	0.1742	0.0014	0.5166	1050.5	6.2	1035	7.6	1085	11	1035	7.6	1.5
11UOK05_39	10.27	0.917	1.931	0.039	0.1779	0.0024	0.066041	1095	14	1055	13	1170	25	1055	13	3.7
11UOK05_40	99	2.335	1.914	0.015	0.1835	0.0013	0.49963	1085.7	5.2	1086.1	7	1085.9	7.8	1086.1	7	0.0
11UOK05_41	64.4	1.209	12.648	0.075	0.4959	0.0040	0.72309	2653.5	5.6	2596	17	2696.2	5.3	2696.2	5.3	3.7
11UOK05_42	90.5	1.174	2.141	0.019	0.1984	0.0015	0.4247	1162.4	6.1	1166.7	7.8	1164	12	1166.7	7.8	0.4
11UOK05_43	30.59	1.149	3.231	0.034	0.2548	0.0026	0.44738	1463.9	8.2	1463	14	1472.7	9.6	1472.7	9.6	0.7
11UOK05_44	57	1.576	1.964	0.018	0.1878	0.0017	0.24489	1102.7	6.3	1109.2	9.1	1097	10	1109.2	9.1	0.6
11UOK05_45	160.3	1.001	2.636	0.038	0.2190	0.0025	0.73617	1310	11	1276	13	1362.7	8.6	1362.7	8.6	6.4
11UOK05_46	84.8	0.901	3.050	0.023	0.2416	0.0017	0.54253	1419.8	5.8	1395	8.8	1451.7	8.7	1451.7	8.7	3.9
11UOK05_47	58.8	1.859	1.733	0.018	0.1726	0.0014	0.46812	1020.5	6.5	1026.3	7.9	1018	10	1026.3	7.9	0.6
11UOK05_48	95.4	1.069	2.869	0.020	0.2376	0.0015	0.53503	1373.5	5.1	1373.9	7.9	1372.6	6.4	1372.6	6.4	0.1
11UOK05_49	83.3	1.476	1.657	0.014	0.1670	0.0011	0.29013	991.8	5.3	996.1	6.3	980.3	9.6	996.1	6.3	0.4
11UOK05_50	29.65	0.89	4.100	0.640	0.2403	0.0050	0.89553	1522	87	1387	26	1660	150	1660	150	16.4
11UOK05_51	49.9	1.468	11.210	0.330	0.4460	0.0130	0.9585	2533	27	2374	56	2666.5	9	2666.5	9	11.0
11UOK05_52	97.9	1.1106	2.865	0.019	0.2351	0.0016	0.53455	1373.1	5	1360.9	8.5	1398.4	7.3	1398.4	7.3	2.7
11UOK05_53	50	1.23	2.770	0.030	0.2214	0.0020	0.70904	1346.9	8	1289	11	1444	10	1444	10	10.7
11UOK05_54	41.6	1.035	1.916	0.019	0.1807	0.0013	0.069823	1087.4	6.6	1070.8	7.1	1114	16	1070.8	7.1	1.5
11UOK05_55	44.7	1.528	1.837	0.021	0.1782	0.0014	0.29456	1059.2	7.2	1056.8	7.6	1066	15	1056.8	7.6	0.2
11UOK05_56	341.6	1.715	1.686	0.012	0.1560	0.0015	0.41285	1003.1	4.6	934.5	8.6	1157	13	934.5	8.6	6.8

11UOK05_57	26.88	0.73	5.025	0.042	0.3153	0.0023	0.35982	1823.1	7.2	1766	11	1885	12	1885	12	6.3
11UOK05_58	105.4	2.215	2.073	0.018	0.1903	0.0016	0.69571	1140.3	6	1123.1	8.6	1174.2	8	1123.1	8.6	1.5
11UOK05_59	373	1.154	1.810	0.020	0.1671	0.0018	0.77102	1048.8	7.3	996	10	1165.2	7.5	996	10	5.0
11UOK05_60	67.6	1.945	5.078	0.046	0.3243	0.0025	0.53341	1832	7.7	1810	12	1866.2	7.5	1866.2	7.5	3.0
11UOK05_61	15.15	1.191	2.778	0.047	0.2358	0.0028	0.53137	1350	12	1365	15	1330	17	1330	17	2.6
11UOK05_62	75.1	1.318	4.699	0.039	0.3137	0.0035	0.68213	1767.5	7.1	1761	17	1766.7	9.5	1766.7	9.5	0.3
11UOK05_63	67.2	1.079	2.407	0.018	0.2092	0.0017	0.39415	1244.4	5.3	1224.4	8.8	1282.8	9	1282.8	9	4.6
11UOK05_64	72.7	1.246	2.711	0.028	0.2248	0.0019	0.59548	1330.8	7.7	1307	10	1374.9	9	1374.9	9	4.9
11UOK05_65	30.2	0.793	1.815	0.071	0.1679	0.0029	0.58102	1050	24	1000	16	1165	50	1000	16	4.8
11UOK05_66	207	1.55	1.882	0.014	0.1803	0.0013	0.5835	1074.6	4.9	1068.7	7.3	1087.5	8	1068.7	7.3	0.5
11UOK05_67	13.37	0.911	2.613	0.044	0.2233	0.0026	0.79922	1304	13	1299	14	1315	14	1315	14	1.2
11UOK05_68	17.17	0.931	1.720	0.029	0.1660	0.0020	0.19693	1015	11	990	11	1078	24	990	11	2.5
11UOK05_69	26.7	1.414	2.017	0.023	0.1907	0.0016	0.16314	1120.7	7.7	1125.3	8.9	1110	18	1125.3	8.9	0.4
11UOK05_70	19.1	0.4457	1.626	0.027	0.1553	0.0017	0.10863	981	10	930.5	9.2	1098	21	930.5	9.2	5.1
11UOK05_71	23.7	1.264	2.672	0.039	0.2226	0.0023	0.4559	1320	11	1295	12	1353	13	1353	13	4.3
11UOK05_72	254	1.898	1.941	0.012	0.1800	0.0013	0.66835	1095.4	4	1066.9	7	1156.5	6.1	1066.9	7	2.6
11UOK05_73	14.69	1.31	2.024	0.032	0.1914	0.0025	0.2782	1123	11	1129	14	1145	22	1129	14	0.5
11UOK05_74	77.8	1.156	4.743	0.048	0.3070	0.0028	0.68189	1774.4	8.5	1726	14	1834.6	9.5	1834.6	9.5	5.9
11UOK05_75	209.3	2.214	1.843	0.011	0.1781	0.0010	0.58436	1061.2	3.9	1056.4	5.7	1069.5	7.9	1056.4	5.7	0.5
11UOK05_76	99.7	1.719	1.881	0.014	0.1817	0.0013	0.23973	1074.3	5	1076.3	7	1081	12	1076.3	7	0.2
11UOK05_77	16.5	1.126	1.981	0.036	0.1865	0.0024	0.13052	1109	13	1102	13	1145	21	1102	13	0.6
11UOK05_78	42.8	1.323	1.714	0.021	0.1653	0.0017	0.495	1014.3	7.7	986.1	9.2	1089	12	986.1	9.2	2.8
11UOK05_79	115.3	1.853	1.626	0.019	0.1613	0.0017	0.7551	980.5	7.4	963.7	9.6	1025.4	9.5	963.7	9.6	1.7
11UOK05_80	22.53	1.191	2.011	0.039	0.1925	0.0026	0.26389	1120	13	1135	14	1107	21	1135	14	1.3
11UOK05_81	86.3	0.85	1.818	0.014	0.1755	0.0012	0.42772	1051.7	5.1	1042.5	6.4	1072.6	8.9	1042.5	6.4	0.9
11UOK05_82	18.89	1.386	2.166	0.034	0.1932	0.0019	0.3649	1172	11	1139	10	1234	19	1139	10	2.8
11UOK05_83	27.6	1.21	3.007	0.043	0.2362	0.0027	0.45608	1409	11	1367	14	1471	16	1471	16	7.1
11UOK05_84	82.6	1.05	4.528	0.040	0.3008	0.0027	0.59814	1736.8	7.2	1695	13	1793.7	9.2	1793.7	9.2	5.5
11UOK05_85	25.7	0.945	9.000	0.480	0.3510	0.0180	0.97668	2338	46	1937	85	2710.7	9.2	2710.7	9.2	28.5
11UOK05_86	18.69	0.94	1.826	0.031	0.1675	0.0021	0.18836	1054	11	1000	12	1173	20	1000	12	5.1

11UOK05_87	47.5	0.541	2.624	0.031	0.2181	0.0024	0.67642	1306.6	8.6	1273	13	1364.9	9.4	1364.9	9.4	6.7
11UOK05_88	169	3.52	1.702	0.016	0.1682	0.0015	0.8739	1008.9	6	1002	8.3	1026.5	8.6	1002	8.3	0.7
11UOK05_89	149	1.777	1.665	0.016	0.1643	0.0013	0.70094	994.8	6.2	980.3	7.1	1036.3	6.7	980.3	7.1	1.5
11UOK05_90	68.6	0.7417	11.990	0.130	0.4745	0.0057	0.74979	2603.1	9.9	2503	25	2685.9	6.7	2685.9	6.7	6.8
11UOK05_91	223	2.607	2.082	0.015	0.1909	0.0013	0.70448	1142.7	4.8	1126.1	7.2	1173.6	5.7	1126.1	7.2	1.5
11UOK05_92	30.6	0.919	2.714	0.034	0.2272	0.0021	0.3333	1332.7	9.4	1319	11	1358	15	1358	15	2.9
11UOK05_93	102.8	2.477	14.630	0.160	0.5194	0.0056	0.74176	2791	10	2696	24	2857	7.4	2857	7.4	5.6
11UOK05_94	88.9	1.377	1.604	0.018	0.1630	0.0017	0.66129	971.4	6.9	974.5	9.1	959	14	974.5	9.1	0.3
11UOK05_95	20.61	1.073	2.810	0.034	0.2306	0.0020	0.21545	1358.6	8.9	1338	11	1396	16	1396	16	4.2
11UOK05_96	140.4	0.69	6.160	0.540	0.2520	0.0210	0.99665	1929	88	1430	110	2611	14	DISC	DISC	45.2
11UOK05_97	58.8	1.258	9.957	0.098	0.3945	0.0047	0.771	2432	9.5	2144	22	2676.1	6.5	2676.1	6.5	19.9
11UOK05_98	134	1.466	1.881	0.019	0.1814	0.0015	0.6823	1074.7	6.9	1074.8	8.2	1077	10	1074.8	8.2	0.0
11UOK05_99	49.6	1.515	3.277	0.028	0.2588	0.0020	0.33934	1475.1	6.6	1484	10	1463	11	1463	11	1.4
11UOK05_100	152	1.128	1.851	0.015	0.1783	0.0012	0.57775	1064	5.3	1057.4	6.6	1082.2	7.9	1057.4	6.6	0.6
11UOK05_101	31.16	0.496	2.016	0.025	0.1906	0.0020	0.55053	1120.2	8.3	1124	11	1133	14	1124	11	0.3
11UOK05_102	136.5	2.242	1.789	0.015	0.1761	0.0013	0.61725	1041.2	5.5	1045.7	7	1029.2	7.9	1045.7	7	0.4
11UOK05_103	18.41	0.55	2.194	0.036	0.1996	0.0023	0.76372	1178	11	1173	13	1193	16	1173	13	0.4
11UOK05_104	25.4	0.986	1.926	0.024	0.1850	0.0019	0.53409	1089.4	8.3	1094	10	1087	16	1094	10	0.4
11UOK05_105	118.7	1.495	1.952	0.015	0.1855	0.0011	0.48966	1098.9	5.3	1096.9	5.7	1104.1	8.5	1096.9	5.7	0.2
11UOK05_106	88.1	2.583	4.848	0.037	0.3220	0.0021	0.46191	1793.7	6.6	1799	10	1785.6	8.3	1785.6	8.3	0.8
11UOK05_107	91	1.232	1.301	0.041	0.1139	0.0042	0.62626	849	19	695	25	1294	48	695	25	18.1
11UOK05_108	162	1.124	1.884	0.013	0.1810	0.0011	0.55143	1075.1	4.6	1072.5	6	1088.2	6	1072.5	6	0.2
11UOK05_109	36	2.463	1.919	0.020	0.1840	0.0015	0.37952	1087.4	7	1088.8	7.9	1093	10	1088.8	7.9	0.1
11UOK05_110	176	1.64	2.192	0.014	0.1989	0.0013	0.7166	1178.4	4.3	1170	6.7	1196.9	6.4	1170	6.7	0.7
11UOK05_111	41.7	2.489	2.209	0.041	0.2015	0.0028	0.75807	1182	13	1183	15	1175	17	1183	15	0.1
11UOK05_112	37	0.934	5.628	0.040	0.3467	0.0023	0.52927	1920	6.2	1918	11	1918.9	7	1918.9	7	0.0
11UOK05_113	49.8	1.124	1.944	0.020	0.1839	0.0015	0.19691	1095.8	7	1088.3	8.1	1113	14	1088.3	8.1	0.7
11UOK05_114	10	1.082	12.760	0.190	0.5029	0.0084	0.67039	2661	14	2625	36	2678	12	2678	12	2.0
11UOK05_115	34.6	1.082	11.410	0.110	0.4584	0.0057	0.70478	2557.7	9.3	2439	24	2656.4	8.2	2656.4	8.2	8.2
11UOK05_116	54.2	2.496	1.860	0.019	0.1771	0.0016	0.44056	1066.7	6.7	1052.1	8.7	1098	10	1052.1	8.7	1.4

11UOK05_117	123.3	1.558	2.456	0.022	0.2082	0.0016	0.71289	1258.7	6.4	1218.9	8.7	1325.7	6.8	1325.7	6.8	8.1
11UOK05_118	94.1	1.124	1.722	0.015	0.1653	0.0017	0.67062	1016.5	5.7	986.2	9.7	1090	11	986.2	9.7	3.0
11UOK05_119	62.6	1.135	4.747	0.040	0.3152	0.0031	0.69337	1776	7.1	1766	15	1785.7	6.6	1785.7	6.6	1.1
11UOK05_120	223	2.611	1.808	0.016	0.1717	0.0014	0.87989	1048.2	5.8	1021.3	7.5	1094.6	5.9	1021.3	7.5	2.6
11UOK05_121	60.7	1.113	3.761	0.045	0.2538	0.0033	0.67067	1583.9	9.6	1458	17	1760	10	1760	10	17.2
11UOK07_1	45.9	1.088	2.032	0.022	0.1910	0.0020	0.49479	1125.7	7.5	1127	11	1123	11	1127	11	0.1
11UOK07_2	56	0.974	3.343	0.037	0.2658	0.0026	0.39655	1492.7	8.6	1519	13	1453	15	1453	15	4.5
11UOK07_3	17.93	1.178	2.031	0.039	0.1934	0.0031	0.32804	1125	13	1140	17	1140	28	1140	17	1.3
11UOK07_4	33.4	0.535	3.082	0.041	0.2518	0.0027	0.26554	1429	10	1448	14	1404	19	1404	19	3.1
11UOK07_5	183	1.257	2.786	0.043	0.2293	0.0037	0.81708	1351	12	1331	19	1389	11	1389	11	4.2
11UOK07_6	62.1	1.276	1.894	0.021	0.1870	0.0018	0.34827	1078.6	7.4	1105	10	1037	15	1105	10	2.4
11UOK07_7	229	10.89	2.001	0.018	0.1928	0.0018	0.66049	1116.5	6	1136.3	9.9	1086	10	1136.3	9.9	1.8
11UOK07_8	191.6	2.084	2.902	0.022	0.2432	0.0019	0.50966	1382.2	5.6	1403	10	1361	11	1361	11	3.1
11UOK07_9	103	1.383	1.742	0.015	0.1757	0.0014	0.29801	1024.8	5.7	1043.1	7.5	999	11	1043.1	7.5	1.8
11UOK07_10	37.72	1.034	1.892	0.024	0.1824	0.0020	0.17457	1078.9	8.7	1080	11	1098	18	1080	11	0.1
11UOK07_11	54.8	1.041	2.895	0.034	0.2416	0.0021	0.29896	1379.8	8.9	1395	11	1369	16	1369	16	1.9
11UOK07_12	93.1	1.258	2.635	0.022	0.2292	0.0018	0.32196	1310.2	6.2	1330.1	9.3	1295	11	1295	11	2.7
11UOK07_13	108.9	0.601	4.229	0.036	0.3009	0.0029	0.55663	1680	6.8	1696	15	1657.9	8.7	1657.9	8.7	2.3
11UOK07_14	22.52	1.987	13.640	0.130	0.5363	0.0056	0.3887	2724.5	9.2	2767	23	2692	10	2692	10	2.8
11UOK07_15	111.3	1.362	15.500	0.160	0.5532	0.0042	0.66124	2848	10	2838	18	2841.8	9.1	2841.8	9.1	0.1
11UOK07_16	92.8	1.019	2.883	0.026	0.2404	0.0023	0.51569	1378.9	6.7	1389	12	1354	10	1354	10	2.6
11UOK07_17	49.85	1.6	3.470	0.390	0.2317	0.0041	0.98881	1459	57	1343	21	1585	96	1585	96	15.3
11UOK07_18	269	1.128	2.442	0.055	0.2053	0.0052	0.93243	1254	16	1203	28	1314	12	1314	12	8.4
11UOK07_19	276	2.924	1.684	0.026	0.1587	0.0024	0.86615	1002	9.7	949	13	1111	11	949	13	5.3
11UOK07_20	56.5	1.979	2.871	0.059	0.2375	0.0024	0.45084	1372	15	1374	13	1360	28	1360	28	1.0
11UOK07_21	24.2	1.388	1.971	0.036	0.1883	0.0024	0.22843	1106	12	1112	13	1074	22	1112	13	0.5
11UOK07_22	44.4	0.877	2.797	0.030	0.2356	0.0022	0.34498	1355.3	7.8	1364	12	1348	13	1348	13	1.2
11UOK07_23	290	1.682	2.292	0.015	0.2076	0.0013	0.39431	1209.6	4.7	1215.8	6.9	1187.4	9.1	1187.4	6.9	0.5

11UOK07_24	51.15	0.563	4.627	0.056	0.3172	0.0035	0.36978	1755	10	1776	17	1736	16	1736	16	2.3
11UOK07_25	94	0.892	2.539	0.025	0.2239	0.0020	0.66441	1282.7	7.3	1302	10	1246	14	1246	14	4.5
11UOK07_26	137.2	1.75	1.977	0.018	0.1875	0.0015	0.47663	1108.3	6.1	1107.6	8.4	1092	11	1107.6	8.4	0.1
11UOK07_27	48.6	1.562	2.042	0.026	0.1946	0.0020	0.36179	1129.1	8.5	1146	11	1092	15	1146	11	1.5
11UOK07_28	97.5	3.218	1.822	0.016	0.1779	0.0014	0.41351	1052.9	5.9	1055.6	7.6	1042	11	1055.6	7.6	0.3
11UOK07_29	104.3	1.376	2.870	0.058	0.2275	0.0050	0.7451	1373	15	1320	26	1465	14	1465	14	9.9
11UOK07_30	70.2	0.75	13.250	0.200	0.5282	0.0073	0.73648	2697	14	2739	30	2665	12	2665	12	2.8
11UOK07_31	31.42	1.388	1.438	0.029	0.1373	0.0024	0.5446	905	12	831	14	1083	20	831	14	8.2
11UOK07_32	236.4	0.8	1.839	0.020	0.1770	0.0021	0.68441	1058.9	7.2	1052	12	1084	11	1052	12	0.7
11UOK07_33	230	2.246	2.048	0.022	0.1975	0.0021	0.5577	1131.3	7.4	1161	11	1091.5	9.6	1161	11	2.6
11UOK07_34	188.5	2.47	3.686	0.050	0.2481	0.0028	0.74372	1568	11	1428	14	1756.1	9	1756.1	9	18.7
11UOK07_35	36	0.95	2.786	0.039	0.2319	0.0028	0.24243	1351	10	1344	14	1351	17	1351	17	0.5
11UOK07_36	29.2	1.2	1.944	0.028	0.1889	0.0024	0.3279	1095.5	9.7	1115	13	1057	20	1115	13	1.8
11UOK07_37	164	1.126	1.958	0.020	0.1884	0.0018	0.67407	1100.8	6.8	1112.3	9.9	1083.2	9.8	1112.3	9.9	1.0
11UOK07_38	125	3.38	2.252	0.022	0.2076	0.0025	0.66075	1197.2	6.9	1218	14	1160	12	1160	14	1.7
11UOK07_39	90.8	1.228	1.932	0.019	0.1829	0.0016	0.3397	1091.8	6.8	1082.9	8.9	1081	15	1082.9	8.9	0.8
11UOK07_40	26.1	1.182	1.925	0.039	0.1804	0.0029	0.56129	1090	13	1069	16	1107	24	1069	16	1.9
11UOK07_41	57.1	0.928	1.957	0.024	0.1859	0.0020	0.41736	1100.2	8.3	1099	11	1109	16	1099	11	0.1
11UOK07_42	137.6	1.288	3.346	0.033	0.2637	0.0029	0.8539	1491.3	7.7	1509	15	1473.1	6.5	1473.1	6.5	2.4
11UOK07_43	83	0.946	1.997	0.022	0.1901	0.0018	0.65004	1114.8	7.6	1122.9	9.3	1108	12	1122.9	9.3	0.7
11UOK07_44	107	1.244	1.947	0.017	0.1877	0.0015	0.42386	1098	6	1109.1	8.1	1078.3	9.8	1109.1	8.1	1.0
11UOK07_45	54.7	1.096	1.990	0.023	0.1903	0.0020	0.42255	1112.5	7.8	1123	11	1107	16	1123	11	0.9
11UOK07_46	272	1.558	2.038	0.026	0.1863	0.0026	0.76566	1128	8.5	1101	14	1199	13	1101	14	2.4
11UOK07_47	24.62	0.806	2.439	0.033	0.2072	0.0033	0.1327	1253.5	9.9	1216	18	1351	18	1351	18	10.0
11UOK07_48	164.8	1.758	1.763	0.022	0.1721	0.0016	0.47349	1031.3	8	1023.5	8.6	1046	13	1023.5	8.6	0.8
11UOK07_49	70.1	0.974	3.341	0.042	0.2634	0.0026	0.57801	1489.9	9.7	1507	13	1459	12	1459	12	3.3
11UOK07_50	41	0.5142	2.093	0.027	0.1971	0.0021	0.29976	1145.9	8.8	1160	11	1147	18	1160	11	1.2
11UOK07_51	76.11	1.598	1.942	0.020	0.1832	0.0016	0.44601	1095.1	6.8	1084.1	9	1109	11	1084.1	9	1.0
11UOK07_52	145.5	2.649	1.941	0.015	0.1879	0.0014	0.45304	1095.2	5.2	1110.1	7.5	1059	10	1110.1	7.5	1.4
11UOK07_53	130.3	1.088	1.958	0.021	0.1860	0.0017	0.45476	1101.6	7	1099.7	9.4	1097	13	1099.7	9.4	0.2

11UOK07_54	51.8	0.5535	1.615	0.021	0.1666	0.0014	0.044306	975.6	8.1	993.3	7.6	958	21	993.3	7.6	1.8
11UOK07_55	29.64	2.258	2.617	0.032	0.2297	0.0024	0.21514	1304.7	8.9	1333	13	1282	18	1282	18	4.0
11UOK07_56	151	2.302	1.935	0.032	0.1850	0.0033	0.80793	1092	11	1094	18	1095	11	1094	18	0.2
11UOK07_57	85.3	1.387	0.835	0.019	0.0824	0.0014	0.16833	616	10	510.3	8	1022	34	510.3	8	17.2
11UOK07_58	89.6	2.001	1.907	0.018	0.1834	0.0019	0.41514	1083.2	6.3	1085	11	1079	14	1085	11	0.2
11UOK07_60	980	2.854	1.326	0.036	0.1253	0.0040	0.91209	856	16	765	24	1100	13	765	24	10.6
11UOK07_60	191	1.991	2.219	0.050	0.2041	0.0044	0.84154	1186	16	1197	24	1163	17	1197	24	0.9
11UOK07_61	135	1.585	1.991	0.024	0.1905	0.0021	0.59883	1112.8	8.1	1124	11	1095	12	1124	11	1.0
11UOK07_62	23.07	1.896	1.938	0.035	0.1867	0.0024	0.18895	1093	12	1105	13	1075	22	1105	13	1.1
11UOK07_63	158.5	1.614	3.209	0.029	0.2553	0.0019	0.48483	1459	6.9	1465	10	1454	12	1454	12	0.8
11UOK07_64	101.3	1.71	2.026	0.023	0.1938	0.0022	0.60513	1123.8	7.6	1142	12	1087	14	1142	12	1.6
11UOK07_65	59.4	2.104	1.773	0.030	0.1727	0.0016	0.29441	1036	11	1028.2	9	1047	23	1028.2	9	0.8
11UOK07_66	180.7	1.961	1.804	0.013	0.1767	0.0012	0.4547	1046.7	4.8	1049.1	6.8	1043.6	7.9	1049.1	6.8	0.2
11UOK07_67	27.9	1.321	2.177	0.033	0.1979	0.0023	0.33205	1173	10	1164	12	1189	17	1164	12	0.8
11UOK07_68	102.7	0.719	1.930	0.025	0.1871	0.0027	0.4034	1091.3	8.6	1105	15	1083	15	1105	15	1.3
11UOK07_69	63.2	2.206	2.392	0.024	0.2158	0.0023	0.48466	1240.7	7.2	1259	12	1201	12	1201	12	4.8
11UOK07_70	71	2.49	2.701	0.037	0.2338	0.0028	0.43911	1328	10	1354	15	1287	15	1287	15	5.2
11UOK07_71	89.3	0.9314	2.006	0.020	0.1921	0.0018	0.4224	1117.2	6.8	1132.7	9.6	1089	11	1132.7	9.6	1.4
11UOK07_72	61.8	1.0454	1.632	0.018	0.1607	0.0016	0.47017	982.4	7	960.5	8.6	1027	14	960.5	8.6	2.2
11UOK07_73	245	0.7871	1.998	0.015	0.1919	0.0012	0.60735	1115.4	4.9	1131.9	6.4	1082.9	8.5	1131.9	6.4	1.5
11UOK07_74	44.4	1.234	2.066	0.031	0.1982	0.0021	0.37678	1137	10	1165	11	1091	15	1165	11	2.5
11UOK07_76	59.4	1.379	2.051	0.025	0.1930	0.0018	0.30903	1133.1	8.3	1137.4	9.5	1124	13	1137.4	9.5	0.4
11UOK07_77	201.8	2.033	2.055	0.013	0.1964	0.0014	0.47818	1133.9	4.3	1155.6	7.5	1092.2	9.1	1155.6	7.5	1.9
11UOK07_78	59.2	2.456	1.640	0.021	0.1641	0.0017	0.26282	985	7.9	979.5	9.6	1017	14	979.5	9.6	0.6
11UOK07_79	42	0.6441	4.448	0.049	0.3061	0.0033	0.42052	1721.6	9.3	1721	16	1725	12	1725	12	0.2
11UOK07_80	48.8	1.171	2.008	0.054	0.1843	0.0041	0.50426	1121	18	1090	23	1167	41	1090	23	2.8
11UOK07_81	58.7	0.7127	2.400	0.027	0.2148	0.0019	0.37211	1241.9	8	1254	10	1229	11	1229	11	2.0
11UOK07_82	275.7	8.75	8.771	0.080	0.3616	0.0037	0.69157	2314.1	8.3	1990	18	2630.6	7.9	2630.6	7.9	24.4
11UOK07_83	259	1.634	1.938	0.021	0.1873	0.0021	0.80129	1094.7	7.5	1107	11	1085.9	8	1107	11	1.1
11UOK07_84	129.8	2.01	2.199	0.021	0.2076	0.0018	0.53288	1180.3	6.6	1216	9.8	1149.9	9.1	1149.9	9.8	3.0

11UOK07_85	45.4	1.264	2.786	0.028	0.2362	0.0027	0.27172	1351.2	7.6	1367	14	1349	16	1349	16	1.3
11UOK07_86	95.9	1.57	1.905	0.016	0.1833	0.0016	0.42426	1083.4	5.7	1085	9	1103	10	1085	9	0.1
11UOK07_87	29.4	1.034	1.806	0.026	0.1714	0.0021	0.51929	1048.2	9.8	1020	12	1115	15	1020	12	2.7
11UOK07_88	107.6	0.473	14.240	0.370	0.5090	0.0100	0.82493	2765	25	2653	44	2873	21	2873	21	7.7
11UOK07_88	58.1	0.413	17.050	0.140	0.5980	0.0053	0.59965	2937	8	3021	21	2890.8	6.1	2890.8	6.1	4.5
11UOK07_89	48.1	1.015	4.348	0.052	0.3091	0.0027	0.38462	1701.5	9.9	1736	14	1678	12	1678	12	3.5
11UOK07_90	109	1.149	1.871	0.032	0.1819	0.0028	0.69293	1070	11	1077	16	1068	14	1077	16	0.7
11UOK07_91	19.31	0.876	2.052	0.040	0.1944	0.0024	0.27557	1132	13	1145	13	1111	23	1145	13	1.1
11UOK07_92	295.4	2.987	1.851	0.012	0.1812	0.0013	0.51152	1063.6	4.1	1073.4	6.9	1040.3	9.1	1073.4	6.9	0.9
11UOK07_93	78.1	1.207	2.930	0.035	0.2466	0.0025	0.60315	1389.3	9.1	1421	13	1348	14	1348	14	5.4
11UOK07_94	236	1.462	2.159	0.022	0.2005	0.0020	0.9204	1167.5	7	1178	11	1162	9.5	1178	11	0.9
11UOK07_95	69.9	2.017	1.636	0.019	0.1659	0.0023	0.61979	984.8	7.6	989	13	968	14	989	13	0.4
11UOK07_96	45.5	0.743	1.780	0.025	0.1720	0.0020	0.23136	1037.4	9.1	1023	11	1081	19	1023	11	1.4
11UOK07_97	42	1.462	1.875	0.024	0.1800	0.0020	0.16701	1072.9	8.4	1067	11	1081	17	1067	11	0.5
11UOK07_98	51.1	1.254	2.726	0.032	0.2301	0.0022	0.51679	1334.9	8.9	1335	12	1341	13	1341	13	0.4
11UOK07_99	47.6	0.9332	2.019	0.043	0.1872	0.0021	0.86791	1120	13	1106	11	1142	18	1106	11	1.3
11UOK07_100	37.7	1.506	2.180	0.110	0.1914	0.0029	0.43792	1164	31	1128	16	1250	68	1128	16	3.1
11UOK07_101	265	1.544	2.183	0.022	0.2037	0.0019	0.616	1175.3	7.2	1195	10	1147	13	1195	10	1.7
11UOK07_102	104	0.66	1.625	0.025	0.1536	0.0022	0.68223	979	9.8	921	12	1136	13	921	12	5.9
11UOK07_103	200.2	8.53	12.909	0.075	0.5206	0.0037	0.72044	2673.5	5.6	2702	16	2660	5	2660	5	1.6
11UOK07_104	79.5	1.106	2.030	0.021	0.1931	0.0017	0.14588	1126.3	6.7	1137.8	9.1	1113	13	1137.8	9.1	1.0
11UOK07_105	71	1.104	1.663	0.050	0.1600	0.0055	0.77573	997	20	962	29	1086	24	962	29	3.5
11UOK07_105	32.3	1.067	1.917	0.045	0.1848	0.0038	0.84528	1086	16	1093	21	1077	24	1093	21	0.6
11UOK07_106	85.7	3.187	1.953	0.020	0.1799	0.0017	0.41128	1099	7	1067.5	9.3	1171	12	1067.5	9.3	2.9
11UOK07_107	58.8	1.234	2.104	0.027	0.1969	0.0016	0.18991	1149.4	8.7	1158.4	8.7	1138	12	1158.4	8.7	0.8
11UOK07_108	173	1.233	2.796	0.021	0.2404	0.0014	0.4409	1354.1	5.7	1388.5	7.2	1315.5	7.5	1315.5	7.5	5.5
11UOK07_109	75.1	1.032	2.009	0.023	0.1906	0.0017	0.3802	1118.9	7.9	1124.6	8.9	1120	12	1124.6	8.9	0.5
11UOK07_110	112.8	0.824	3.200	0.068	0.2268	0.0043	0.92599	1457	16	1317	23	1665.3	9.9	1665.3	9.9	20.9
11UOK07_111	29.6	0.84	2.509	0.050	0.2102	0.0049	0.27219	1274	14	1230	26	1367	51	1367	51	10.0
11UOK07_112	140.9	1.646	1.896	0.016	0.1854	0.0017	0.44237	1079.4	5.6	1096.5	9.3	1052	12	1096.5	9.3	1.6

11UOK07_113	70.3	1.08	1.856	0.024	0.1811	0.0020	0.4542	1066.9	8.6	1073	11	1059	14	1073	11	0.6
11UOK07_114	284	8.8	11.280	0.250	0.4532	0.0085	0.89744	2546	21	2409	38	2663	10	2663	10	9.5
11UOK07_114	289.4	11.26	11.730	0.150	0.4691	0.0056	0.72503	2582	12	2479	25	2656.8	8.7	2656.8	8.7	6.7
11UOK07_115	38.7	0.8347	2.767	0.036	0.2381	0.0027	0.43057	1347.2	9.4	1377	14	1312	15	1312	15	5.0
11UOK07_116	91.5	0.652	1.598	0.028	0.1457	0.0021	0.68819	969	11	877	12	1187	14	877	12	9.5
11UOK07_116	33.2	0.832	2.404	0.060	0.2168	0.0046	0.38197	1243	18	1265	24	1208	37	1208	37	4.7
11UOK07_117	261	1.329	2.856	0.053	0.2319	0.0040	0.89348	1370	14	1344	21	1405	14	1405	14	4.3
11UOK07_117	309	1.288	3.179	0.033	0.2538	0.0027	0.73869	1453	7.7	1458	14	1444.3	8.7	1444.3	8.7	0.9
11UOK07_118	185	1.872	5.596	0.086	0.3523	0.0059	0.83528	1915	13	1945	28	1885	15	1885	15	3.2
11UOK07_119	716	2.969	1.441	0.038	0.1255	0.0039	0.91925	906	16	762	22	1259	17	762	22	15.9
11UOK07_119	252	2.359	1.936	0.023	0.1771	0.0027	0.86284	1093.2	8.1	1051	15	1173	12	1051	15	3.9
11UOK07_120	68	2.12	2.860	0.077	0.2421	0.0053	0.91322	1370	21	1397	28	1320	17	1320	17	5.8
11UOK07_121	409	1.806	4.487	0.040	0.3074	0.0055	0.40692	1728.4	7.4	1727	27	1726	18	1726	18	0.1

Table 2a: Canyon Range Conglomerate: Canyon Mountains

Sample Name:								**207/235**		**206/238**		**206/207**		**Best age**		
Grain #	**[U] ppm**	**U/Th**	**207/235**	**2σ error**	**206/238**	**2σ error**	**RHO**	**Age Ma**	**2σ error**	**Age (Ma)**	**2σ error**	**Age (Ma)**	**2σ error**	**(Ma)**	**2σ error**	**% Discordance***
11UPC05_1	375	1.346	1.930	0.025	0.1850	0.0025	0.95265	1090.8	9	1094	13	1100.3	7.8	1094	13	0.3
11UPC05_2	91	0.455	3.140	0.190	0.1897	0.0047	0.76495	1430	45	1119	25	1916	70	1119	25	21.7
11UPC05_3	185	1.333	1.969	0.024	0.1882	0.0020	0.94752	1104.3	8.1	1111	11	1109	11	1111	11	0.6
11UPC05_4	257	0.919	2.855	0.026	0.2396	0.0023	0.69267	1369.6	6.8	1385	12	1367.2	9.2	1367.2	9.2	1.3
11UPC05_5	151.1	1.403	1.697	0.015	0.1730	0.0014	0.72746	1007.1	5.6	1028.8	7.4	975	10	1028.8	7.4	2.2
11UPC05_6	50.9	0.6835	5.529	0.044	0.3450	0.0023	0.27093	1905.6	6.7	1911	11	1901	9.4	1901	9.4	0.5
11UPC05_7	68.4	1.278	2.015	0.034	0.1895	0.0034	0.2804	1120	11	1118	18	1140	26	1118	18	0.2
11UPC05_8	84.6	1.4	2.328	0.022	0.2098	0.0016	0.18792	1220.3	6.7	1227.7	8.7	1215	11	1215	11	1.0
11UPC05_9	271	1.259	3.153	0.030	0.2568	0.0028	0.79655	1447	7.3	1473	14	1405.4	8.3	1405.4	8.3	4.8
11UPC05_10	248	1.688	3.145	0.022	0.2541	0.0018	0.46124	1443.4	5.4	1459.6	9.2	1435.8	7.7	1435.8	7.7	1.7

11UPC05_11	860	1.73	3.600	0.180	0.2410	0.0130	0.98309	1543	42	1384	70	1804	17	1804	17	23.3
11UPC05_12	93	3.322	5.254	0.054	0.3418	0.0041	0.41607	1861.9	9	1897	19	1829	13	1829	13	3.7
11UPC05_13	27	0.754	2.013	0.039	0.1890	0.0028	0.24189	1118	13	1118	16	1100	24	1118	16	0.0
11UPC05_14	211	1.34	1.944	0.023	0.1856	0.0019	0.55144	1096.8	7.7	1097	10	1098	15	1097	10	0.0
11UPC05_15	201	1.684	4.727	0.038	0.3182	0.0024	0.68745	1771.6	6.7	1781	12	1769	5.4	1769	5.4	0.7
11UPC05_16	339	1.79	4.389	0.063	0.2988	0.0035	0.93297	1709	12	1685	17	1725	13	1725	13	2.3
11UPC05_17	383	0.799	3.098	0.035	0.2478	0.0031	0.94859	1429	10	1427	16	1445.2	9.3	1445.2	9.3	1.3
11UPC05_18	94.6	0.946	13.300	0.130	0.5245	0.0063	0.76624	2703	9.2	2717	27	2694.2	7.5	2694.2	7.5	0.8
11UPC05_19	42.1	0.668	1.989	0.028	0.1867	0.0018	0.42179	1110.9	9.6	1103.4	9.5	1122	15	1103.4	9.5	0.7
11UPC05_20	22.3	0.989	2.489	0.050	0.2093	0.0036	0.43037	1269	15	1227	20	1368	25	1368	25	10.3
11UPC05_21	64.9	1.91	4.238	0.035	0.2974	0.0026	0.61387	1681	6.7	1678	13	1692.8	8.5	1692.8	8.5	0.9
11UPC05_22	101	1.726	2.770	0.031	0.2286	0.0025	0.71567	1347	8.3	1327	13	1373	11	1373	11	3.4
11UPC05_23	57.5	2.523	4.349	0.041	0.2931	0.0028	0.72433	1702.1	7.9	1657	14	1770.4	8.7	1770.4	8.7	6.4
11UPC05_24	71.2	0.841	2.896	0.035	0.2388	0.0033	0.48047	1380.2	9	1380	17	1382	15	1382	15	0.1
11UPC05_25	101.8	1.404	1.969	0.027	0.1886	0.0030	0.60519	1104.1	9.1	1116	16	1098	17	1116	16	1.1
11UPC05_26	138	1.4	1.979	0.031	0.1882	0.0032	0.86292	1107	11	1111	18	1104	20	1111	18	0.4
11UPC05_27	164	1.55	2.128	0.034	0.1970	0.0026	0.74804	1158	11	1159	14	1149	15	1159	14	0.1
11UPC05_28	112.7	0.726	5.173	0.064	0.3330	0.0051	0.5817	1848	10	1855	25	1836	15	1836	15	1.0
11UPC05_29	35.8	0.853	3.201	0.051	0.2539	0.0045	0.68773	1456	12	1458	23	1441	16	1441	16	1.2
11UPC05_30	321	1.4	3.151	0.031	0.2533	0.0029	0.83911	1444.7	7.6	1457	15	1434	12	1434	12	1.6
11UPC05_31	118	1.06	1.969	0.019	0.1889	0.0019	0.4142	1105.4	6.4	1116	10	1100	12	1116	10	1.0
11UPC05_32	44.1	1.176	2.012	0.038	0.1892	0.0031	0.65847	1120	13	1117	17	1123	15	1117	17	0.3
11UPC05_33	31.3	1.7	1.930	0.033	0.1804	0.0026	0.45674	1093	11	1069	14	1143	22	1069	14	2.2
11UPC05_34	204.3	0.938	3.183	0.018	0.2557	0.0016	0.76284	1452.8	4.5	1467.9	8.4	1435.3	5.8	1435.3	5.8	2.3
11UPC05_35	64.5	0.782	6.442	0.048	0.3616	0.0032	0.78235	2038.5	7.3	1989	15	2092.4	7.8	2092.4	7.8	4.9
11UPC05_36	51.3	1.288	2.892	0.035	0.2383	0.0020	0.2964	1379.1	9.1	1378	10	1382	15	1382	15	0.3
11UPC05_37	370	1.533	4.740	0.120	0.3058	0.0050	0.30704	1772	21	1719	25	1848	29	1848	29	7.0
11UPC05_38	60.2	0.987	1.941	0.025	0.1862	0.0021	0.44011	1094.5	8.6	1100	11	1085	16	1100	11	0.5
11UPC05_39	395	1.28	2.448	0.047	0.1801	0.0033	0.92781	1261	14	1067	18	1600	10	1067	18	15.4
11UPC05_40	36.3	1.168	2.893	0.039	0.2378	0.0019	0.47415	1379	10	1375	10	1397	14	1397	14	1.6

11UPC05_41	34.6	0.947	1.974	0.029	0.1872	0.0019	0.19711	1105.6	9.9	1106	10	1132	14	1106	10	0.0
11UPC05_42	93.7	1.561	1.876	0.025	0.1818	0.0018	0.64576	1072.9	8.8	1077	10	1061	14	1077	10	0.4
11UPC05_43	87.5	1.633	2.045	0.026	0.1923	0.0019	0.52621	1130.1	8.5	1133	10	1136	12	1133	10	0.3
11UPC05_44	46	2.5	4.667	0.051	0.3147	0.0025	0.44487	1760.5	9.1	1764	12	1763	11	1763	11	0.1
11UPC05_45	33.38	0.339	5.455	0.061	0.3360	0.0036	0.53018	1892.6	9.6	1867	17	1919	11	1919	11	2.7
11UPC05_46	258	0.76	2.864	0.036	0.2267	0.0029	0.86616	1371.7	9.5	1317	15	1454.1	6.1	1454.1	6.1	9.4
11UPC05_47	326	1.422	2.840	0.017	0.2366	0.0018	0.86359	1366	4.5	1369.1	9.3	1362.2	5.9	1362.2	5.9	0.5
11UPC05_48	53	1.208	1.443	0.033	0.1381	0.0023	0.11555	905	14	834	13	1114	19	834	13	7.8
11UPC05_49	122.1	1.324	17.370	0.170	0.6030	0.0066	0.96093	2955.1	9.3	3041	27	2895.6	7.4	2895.6	7.4	5.0
11UPC05_50	221	1.339	1.957	0.031	0.1879	0.0028	0.92361	1100	11	1110	15	1089	12	1110	15	0.9
11UPC05_51	112	1.423	2.832	0.029	0.2344	0.0022	0.5307	1364.6	7.4	1359	11	1372	11	1372	11	0.9
11UPC05_52	26.9	0.775	1.907	0.033	0.1811	0.0021	0.0079805	1085	12	1073	12	1102	27	1073	12	1.1
11UPC05_53	88.1	1.164	1.877	0.020	0.1795	0.0016	0.094695	1072.4	7	1064	8.6	1092	16	1064	8.6	0.8
11UPC05_54	114	2.387	1.961	0.017	0.1870	0.0013	0.53515	1102.6	5.8	1105	7.3	1099	12	1105	7.3	0.2
11UPC05_55	119	1.783	4.335	0.033	0.3011	0.0025	0.63357	1699.7	6.2	1697	12	1701.3	7	1701.3	7	0.3
11UPC05_56	105.5	1.0239	5.212	0.032	0.3358	0.0022	0.62915	1854.4	5.2	1866	10	1841.7	6	1841.7	6	1.3
11UPC05_57	292	1.669	1.937	0.018	0.1852	0.0018	0.73361	1093.5	6.3	1094.9	9.9	1091	11	1094.9	9.9	0.1
11UPC05_58	125.9	0.676	6.886	0.059	0.3846	0.0026	0.77145	2096.3	7.6	2099	13	2098	8.3	2098	8.3	0.0
11UPC05_59	122.9	1.043	4.318	0.029	0.2991	0.0020	0.51959	1697.1	5.6	1687	10	1709.7	7.3	1709.7	7.3	1.3
11UPC05_60	208	1.557	2.660	0.029	0.2142	0.0026	0.77737	1316.8	8.1	1251	14	1440	9.4	1440	9.4	13.1
11UPC05_61	100.2	1.271	6.966	0.054	0.3937	0.0032	0.7227	2106.6	6.9	2140	15	2081.6	5.5	2081.6	5.5	2.8
11UPC05_62	74.2	0.54	3.224	0.030	0.2559	0.0023	0.4399	1462.4	7.2	1469	12	1450	11	1450	11	1.3
11UPC05_63	75.6	1.77	2.106	0.023	0.1934	0.0021	0.60654	1151.3	7.6	1140	11	1183	12	1140	11	1.0
11UPC05_64	154	0.96	3.249	0.026	0.2605	0.0023	0.8395	1468.6	6.2	1492	12	1434.3	6.1	1434.3	6.1	4.0
11UPC05_65	101.8	1.164	21.060	0.230	0.6344	0.0072	0.7916	3140	11	3166	28	3121.3	6.8	3121.3	6.8	1.4
11UPC05_66	21.3	0.3446	5.881	0.071	0.3536	0.0037	0.13062	1959	10	1951	17	1974	16	1974	16	1.2
11UPC05_67	61.6	0.6005	5.361	0.051	0.3338	0.0038	0.56783	1880.3	7.7	1856	18	1920	10	1920	10	3.3
11UPC05_68	125.4	1.989	4.868	0.029	0.3244	0.0018	0.42269	1797.1	4.9	1810.9	8.6	1783.6	6.7	1783.6	6.7	1.5
11UPC05_69	32.9	1.814	3.177	0.043	0.2528	0.0033	0.45789	1455.3	9.6	1452	17	1446	15	1446	15	0.4
11UPC05_70	161	1.61	4.853	0.039	0.3240	0.0027	0.74167	1793.7	6.8	1809	13	1767.8	5.6	1767.8	5.6	2.3

11UPC05_71	111.9	1.084	4.791	0.046	0.3165	0.0032	0.75659	1782.7	8.2	1772	16	1791.8	6.4	1791.8	6.4	1.1
11UPC05_72	102.8	0.886	1.929	0.014	0.1840	0.0015	0.24672	1091.7	4.9	1088.7	8	1095	10	1088.7	8	0.3
11UPC05_73	76.4	0.592	2.954	0.032	0.2472	0.0022	0.46168	1398.2	8	1424	11	1359	11	1359	11	4.8
11UPC05_74	218	1.387	4.820	0.039	0.3227	0.0021	0.66684	1789.2	6.7	1803	10	1770.1	6.1	1770.1	6.1	1.9
11UPC05_75	54.2	0.4392	4.742	0.046	0.3172	0.0023	0.4427	1776.2	8.5	1776	11	1772	10	1772	10	0.2
11UPC05_76	92.5	2.053	4.404	0.032	0.3067	0.0023	0.61846	1713.6	5.9	1724	11	1698.9	7.7	1698.9	7.7	1.5
11UPC05_77	473	0.932	3.548	0.051	0.2435	0.0035	0.98227	1537	12	1404	18	1727.8	5.7	1727.8	5.7	18.7
11UPC05_78	36.6	1.204	2.034	0.033	0.1906	0.0027	0.46658	1127	11	1124	14	1146	18	1124	14	0.3
11UPC05_79	53.5	0.9826	2.857	0.038	0.2387	0.0027	0.72556	1373	10	1380	14	1363	11	1363	11	1.2
11UPC05_80	110	1.2	4.517	0.048	0.3156	0.0038	0.63848	1733.3	8.8	1768	18	1691	10	1691	10	4.6
11UPC05_81	10.98	1.993	4.427	0.084	0.2917	0.0038	0.059237	1715	16	1649	19	1801	26	1801	26	8.4
11UPC05_82	183	1.47	2.026	0.019	0.1898	0.0017	0.61782	1123.9	6.2	1120	9.2	1132	10	1120	9.2	0.3
11UPC05_83	1360	3.3	2.860	0.240	0.1920	0.0160	0.99738	1333	62	1121	86	1768.9	5.4	1121	86	15.9
11UPC05_84	105.7	0.762	1.927	0.021	0.1853	0.0015	0.43142	1090.9	7.1	1095.6	8	1087	10	1095.6	8	0.4
11UPC05_85	75.9	0.791	1.913	0.028	0.1850	0.0021	0.58172	1084.8	9.7	1094	12	1078	14	1094	12	0.8
11UPC05_86	59.8	1.176	1.967	0.032	0.1893	0.0025	0.52905	1105	11	1118	14	1077	19	1118	14	1.2
11UPC05_87	68.1	0.801	5.000	0.110	0.2909	0.0024	0.233	1816	18	1646	12	2027	38	2027	38	18.8
11UPC05_88	187.8	1.889	4.419	0.031	0.3068	0.0020	0.72136	1715.6	5.9	1725	10	1707.1	6.7	1707.1	6.7	1.0
11UPC05_89	28.6	0.664	1.941	0.032	0.1874	0.0025	0.34674	1101	11	1107	13	1114	22	1107	13	0.5
11UPC05_90	137.3	1.244	3.311	0.043	0.2649	0.0029	0.74269	1484	10	1515	15	1438	13	1438	13	5.4
11UPC05_91	120	0.926	3.190	0.037	0.2548	0.0030	0.85767	1454	8.9	1465	16	1436	11	1436	11	2.0
11UPC05_92	206	0.944	3.167	0.020	0.2538	0.0018	0.46113	1449	4.9	1457.7	9.1	1435	8.1	1435	8.1	1.6
11UPC05_93	187	1.24	1.945	0.026	0.1873	0.0024	0.58011	1095.9	8.9	1106	13	1068	14	1106	13	0.9
11UPC05_94	67.1	1.576	3.126	0.037	0.2519	0.0023	0.58513	1439.4	9	1448	12	1432	10	1432	10	1.1
11UPC05_95	155.9	1.142	0.709	0.008	0.0888	0.0008	0.33595	544	4.8	548.6	5	530	15	548.6	5	0.8
11UPC05_96	88.3	2.373	2.523	0.056	0.2009	0.0047	0.77783	1279	16	1179	25	1439	17	1179	25	7.8
11UPC05_97	660	2.91	3.820	0.150	0.2581	0.0099	0.98391	1589	34	1477	51	1769	10	1769	10	16.5
11UPC05_98	65	0.871	1.959	0.038	0.1867	0.0043	0.93327	1096	15	1103	24	1114	19	1103	24	0.6
11UPC05_99	41.4	0.604	2.998	0.080	0.2359	0.0065	0.12515	1406	20	1365	34	1542	89	1542	89	11.5
11UPC05_100	74.3	0.993	2.043	0.029	0.1928	0.0023	0.30906	1129	9.6	1137	12	1119	17	1137	12	0.7

11UPC05_101	335	3.41	1.956	0.029	0.1877	0.0027	0.9634	1100	10	1109	15	1086	11	1109	15	0.8
11UPC05_102	140	1.178	1.971	0.012	0.1899	0.0014	0.24845	1105.5	4.2	1120.8	7.4	1083	10	1120.8	7.4	1.4
11UPC05_103	173.3	1.476	3.731	0.036	0.2626	0.0029	0.74463	1579.5	7.9	1503	15	1687.8	8	1687.8	8	10.9
11UPC05_104	512	3.717	4.159	0.059	0.2837	0.0044	0.7967	1666	12	1610	22	1749	10	1749	10	7.9
11UPC05_105	141	1.232	1.970	0.021	0.1867	0.0019	0.55903	1105.8	7.3	1103	10	1101	12	1103	10	0.3
11UPC05_106	103.3	1.428	2.062	0.042	0.1879	0.0022	0.17814	1135	13	1110	12	1169	32	1110	12	2.2
11UPC05_107	396	0.899	4.342	0.060	0.3011	0.0051	0.9427	1702	12	1696	25	1708.4	8.2	1708.4	8.2	0.7
11UPC05_108	90.4	1.041	3.055	0.027	0.2472	0.0023	0.5017	1421.1	6.7	1424	12	1418.7	9.9	1418.7	9.9	0.4
11UPC05_109	83.1	0.635	3.079	0.041	0.2453	0.0035	0.77298	1426	10	1414	18	1458	11	1458	11	3.0
11UPC05_110	175.4	1.193	1.831	0.014	0.1819	0.0012	0.47368	1056.5	5	1077.1	6.6	1023.7	8.9	1077.1	6.6	1.9
11UPC05_111	132	1.8	4.439	0.046	0.3090	0.0033	0.95199	1712	13	1730	20	1705.1	8.2	1705.1	8.2	1.5
11UPC05_112	23.2	0.549	1.970	0.038	0.1889	0.0023	0.10743	1104	13	1115	13	1096	26	1115	13	1.0
11UPC05_113	88.3	24	1.912	0.035	0.1835	0.0026	0.65909	1085	12	1086	14	1086	22	1086	14	0.1
11UPC05_114	76.6	0.6937	5.246	0.042	0.3380	0.0022	0.37354	1859.7	6.9	1877	11	1840.4	8.6	1840.4	8.6	2.0
11UPC05_115	56.7	0.865	2.123	0.034	0.1922	0.0018	0.22922	1155	11	1133.3	9.8	1188	23	1133.3	9.8	1.9
11UPC05_116	316	2.48	4.216	0.064	0.2920	0.0045	0.94086	1677	12	1651	22	1702.5	8.2	1702.5	8.2	3.0
11UPC05_117	58	2.879	4.567	0.048	0.3104	0.0044	0.54449	1742.6	8.8	1742	21	1737	14	1737	14	0.3
11UPC05_118	68.2	1.386	2.072	0.032	0.1915	0.0022	0.42346	1139	10	1130	12	1151	22	1130	12	0.8
11UPC05_119	226.1	1.2426	2.024	0.014	0.1919	0.0015	0.77837	1123.3	4.8	1131.8	8	1111.8	8.2	1131.8	8	0.8
11UPC05_120	117	1.32	1.960	0.024	0.1869	0.0018	0.59285	1103.2	8.1	1104.6	9.9	1098	11	1104.6	9.9	0.1
11UPC06_1	81.3	0.987	4.744	0.047	0.3152	0.0030	0.62266	1774.4	8.3	1766	15	1773.1	9.9	1773.1	9.9	0.4
11UPC06_2	246	2.262	1.959	0.030	0.1830	0.0026	0.74449	1101	10	1083	14	1128	13	1083	14	1.6
11UPC06_3	80.3	1.519	3.185	0.033	0.2529	0.0028	0.64388	1453.1	7.9	1453	14	1448	10	1448	10	0.3
11UPC06_4	74.5	4.36	4.135	0.040	0.2877	0.0031	0.7156	1660.7	8	1630	16	1683	12	1683	12	3.1
11UPC06_5	202	1.243	1.993	0.022	0.1880	0.0020	0.66955	1112.8	7.5	1110	11	1094	10	1110	11	0.3
11UPC06_6	157	2.063	4.442	0.035	0.3075	0.0021	0.46997	1719.8	6.5	1728	10	1702.2	6.7	1702.2	6.7	1.5
11UPC06_7	202	1.474	3.084	0.079	0.2376	0.0052	0.88467	1436	20	1378	26	1501	18	1501	18	8.2
11UPC06_8	88.1	1.139	2.537	0.023	0.2064	0.0017	0.43684	1282.3	6.5	1209.4	9	1390	10	1390	10	13.0

11UPC06_9	33.7	0.742	4.027	0.050	0.2856	0.0035	0.6062	1640	10	1619	18	1658	11	1658	11	2.4
11UPC06_10	67	0.737	2.377	0.032	0.2059	0.0021	0.11666	1235	9.6	1207	11	1298	27	1298	27	7.0
11UPC06_11	65.3	0.781	5.127	0.047	0.3329	0.0038	0.67528	1840	7.8	1852	18	1813.6	9.7	1813.6	9.7	2.1
11UPC06_12	85	1.376	5.208	0.047	0.3328	0.0033	0.61252	1853.4	7.7	1853	15	1851.5	8.6	1851.5	8.6	0.1
11UPC06_13	138.3	1.579	2.887	0.021	0.2385	0.0024	0.63398	1378.1	5.4	1379	12	1366.2	9.6	1366.2	9.6	0.9
11UPC06_14	48.1	0.636	13.290	0.110	0.5143	0.0050	0.65467	2699.8	8.1	2674	21	2712.3	9	2712.3	9	1.4
11UPC06_15	92.1	1.739	5.441	0.047	0.3479	0.0038	0.64201	1890.9	7.4	1924	18	1841.6	9.5	1841.6	9.5	4.5
11UPC06_16	746	1.278	3.030	0.130	0.1613	0.0073	0.91662	1412	32	963	40	2177	29	DISC	DISC	55.8
11UPC06_16	245	1.42	4.894	0.079	0.3124	0.0061	0.6939	1800	14	1752	30	1850	13	1850	13	5.3
11UPC06_17	23.9	1.27	3.126	0.038	0.2532	0.0031	0.5413	1438.4	9.3	1455	16	1416	15	1416	15	2.8
11UPC06_19	156.6	0.86	13.184	0.098	0.5149	0.0048	0.67169	2692.4	7	2680	20	2700.7	7.4	2700.7	7.4	0.8
11UPC06_20	265.2	1.637	2.166	0.016	0.1973	0.0017	0.51535	1170	5.2	1160.7	9	1180	10	1160.7	9	0.8
11UPC06_21	55.2	0.4156	6.475	0.053	0.3649	0.0039	0.52526	2042	7.3	2005	18	2065	10	2065	10	2.9
11UPC06_22	145.6	1.096	5.346	0.048	0.3295	0.0041	0.76383	1876.7	7.6	1836	20	1908	11	1908	11	3.8
11UPC06_23	211	0.733	2.546	0.034	0.2071	0.0028	0.84155	1284.5	9.8	1213	15	1402.5	7.5	1402.5	7.5	13.5
11UPC06_24	164	1.179	5.800	0.100	0.3476	0.0083	0.78649	1945	15	1922	40	1952	15	1952	15	1.5
11UPC06_25	76	0.555	5.338	0.046	0.3384	0.0032	0.55528	1874.4	7.3	1881	15	1860.6	8.3	1860.6	8.3	1.1
11UPC06_26	176.4	2.242	3.185	0.025	0.2520	0.0030	0.50996	1453.3	6.1	1448	15	1456	10	1456	10	0.5
11UPC06_27	30.64	0.672	5.620	0.065	0.3482	0.0044	0.63044	1920	10	1925	21	1918	11	1918	11	0.4
11UPC06_28	294	0.988	10.300	0.110	0.4492	0.0047	0.88163	2462.2	9.4	2391	21	2519.9	4.8	2519.9	4.8	5.1
11UPC06_29	15.24	0.7803	1.887	0.035	0.1826	0.0028	0.27561	1075	12	1081	15	1096	23	1081	15	0.6
11UPC06_30	313	0.999	3.624	0.081	0.2023	0.0045	0.72898	1555	19	1187	24	2098	25	1187	24	23.7
11UPC06_31	82.4	1.492	3.221	0.036	0.2520	0.0028	0.78941	1462.8	9.1	1449	15	1474.3	8.6	1474.3	8.6	1.7
11UPC06_32	37	0.677	3.121	0.036	0.2495	0.0030	0.49368	1437.3	8.8	1436	16	1440	15	1440	15	0.3
11UPC06_33	23.1	0.5937	4.749	0.070	0.3081	0.0047	0.76611	1776	13	1731	23	1830	12	1830	12	5.4
11UPC06_35	58.1	1.262	1.780	0.021	0.1716	0.0018	0.56684	1038.9	7.7	1020.7	9.8	1080	13	1020.7	9.8	1.8
11UPC06_36	46.4	0.646	12.120	0.130	0.4732	0.0054	0.6943	2612.8	9.9	2497	24	2699.4	7.8	2699.4	7.8	7.5
11UPC06_37	268.2	1.066	4.169	0.063	0.2873	0.0043	0.90406	1667	13	1627	22	1716.4	9.7	1716.4	9.7	5.2
11UPC06_38	28.43	1.157	4.219	0.053	0.2923	0.0034	0.39175	1677	10	1653	17	1703	12	1703	12	2.9
11UPC06_39	89.1	1.022	3.522	0.079	0.2451	0.0046	0.66871	1531	18	1413	24	1712	22	1712	22	17.5

11UPC06_39	61.4	0.837	4.060	0.073	0.2868	0.0063	0.64658	1645	15	1624	32	1687	20	1687	20	3.7
11UPC06_40	61.7	2.232	4.846	0.047	0.3247	0.0040	0.64869	1792.4	8.1	1812	20	1756	10	1756	10	3.2
11UPC06_41	141	1.25	2.909	0.024	0.2410	0.0027	0.54387	1384	6.2	1391	14	1381	14	1381	14	0.7
11UPC06_42	63.2	0.5238	4.091	0.047	0.2897	0.0037	0.69744	1651.7	9.5	1640	18	1674	10	1674	10	2.0
11UPC06_43	68.5	0.929	12.621	0.096	0.5078	0.0055	0.72426	2651.4	7.2	2646	23	2659.3	6.4	2659.3	6.4	0.5
11UPC06_44	146	0.5646	5.527	0.064	0.3442	0.0043	0.71247	1905.3	9.7	1906	20	1918.6	8.6	1918.6	8.6	0.7
11UPC06_45	129.1	2.048	1.924	0.022	0.1851	0.0025	0.68506	1089	7.7	1094	14	1092	13	1094	14	0.5
11UPC06_46	77	1.017	4.302	0.046	0.2979	0.0042	0.77657	1694.4	9.2	1680	21	1726	8.9	1726	8.9	2.7
11UPC06_47	144.6	1.26	2.984	0.033	0.2369	0.0031	0.83692	1403	8.5	1370	16	1459.6	9.8	1459.6	9.8	6.1
11UPC06_48	18.13	2.734	1.972	0.030	0.1837	0.0024	0.14134	1105	10	1087	13	1147	17	1087	13	1.6
11UPC06_49	49.3	3.746	5.197	0.047	0.3325	0.0039	0.54906	1851.5	7.8	1850	19	1861.5	8.5	1861.5	8.5	0.6
11UPC06_50	156	1.9	2.100	0.031	0.1931	0.0029	0.82004	1148	10	1138	16	1178	13	1138	16	0.9
11UPC06_51	174	1.271	2.641	0.032	0.2253	0.0033	0.90398	1311.5	9.1	1309	17	1332	12	1332	12	1.7
11UPC06_52	421	3.37	3.151	0.092	0.2185	0.0064	0.95363	1446	22	1272	34	1703.7	8.1	1703.7	8.1	25.3
11UPC06_53	45	1.0541	1.755	0.024	0.1688	0.0023	0.50963	1028.5	8.7	1005	13	1081	16	1005	13	2.3
11UPC06_54	91.1	2.164	3.025	0.027	0.2422	0.0035	0.67766	1413.6	6.9	1398	18	1443.3	9.9	1443.3	9.9	3.1
11UPC06_55	47	0.5901	4.644	0.045	0.2997	0.0038	0.60282	1756.7	8.1	1689	19	1832	11	1832	11	7.8
11UPC06_56	94.6	1.427	2.817	0.030	0.2367	0.0040	0.60656	1360.5	8.1	1369	21	1361	12	1361	12	0.6
11UPC06_57	103.3	0.62	2.985	0.034	0.2380	0.0031	0.6045	1403	8.7	1376	16	1439	15	1439	15	4.4
11UPC06_58	118.7	1.156	3.930	0.048	0.2547	0.0052	0.68126	1621	9.6	1462	27	1842	13	1842	13	20.6
11UPC06_59	389	1.833	2.479	0.067	0.1998	0.0070	0.97904	1264	21	1173	38	1445	19	1173	38	7.2
11UPC06_60	200	1.37	3.057	0.029	0.2451	0.0036	0.66003	1421.5	7.3	1413	19	1448	11	1448	11	2.4
11UPC06_61	206	2.74	1.758	0.020	0.1738	0.0028	0.69894	1029.5	7.4	1035	16	1027	12	1035	16	0.5
11UPC06_62	191	2.222	4.707	0.054	0.3092	0.0055	0.90693	1767.6	9.6	1736	27	1818	13	1818	13	4.5
11UPC06_63	32.4	0.998	8.440	0.200	0.3337	0.0088	0.90458	2275	22	1859	43	2671	12	DISC	DISC	30.4
11UPC06_64	66.8	1.293	3.081	0.031	0.2475	0.0033	0.48673	1428.4	7.9	1425	17	1439	13	1439	13	1.0
11UPC06_65	160.4	2.763	2.916	0.027	0.2351	0.0027	0.71769	1385.5	7.1	1361	14	1428.8	9.2	1428.8	9.2	4.7
11UPC06_66	119.9	2.34	4.850	0.110	0.3121	0.0066	0.77527	1791	18	1750	32	1868	19	1868	19	6.3
11UPC06_67	143	0.916	5.008	0.042	0.3220	0.0044	0.70688	1820.3	7.1	1799	21	1860.3	9.9	1860.3	9.9	3.3
11UPC06_68	83.2	0.961	3.059	0.034	0.2464	0.0039	0.6887	1421.7	8.4	1422	21	1443	12	1443	12	1.5

11UPC06_69	133	1.917	2.945	0.033	0.2384	0.0047	0.69685	1393.2	8.4	1378	25	1431	12	1431	12	3.7
11UPC06_70	123.8	1.625	4.913	0.052	0.3224	0.0051	0.73579	1803.8	9	1800	25	1823	13	1823	13	1.3
11UPC06_71	72.5	0.7687	8.518	0.079	0.4207	0.0069	0.7203	2288.2	8.3	2262	31	2321.2	9.2	2321.2	9.2	2.6
11UPC06_72	138	1.446	2.102	0.021	0.1969	0.0029	0.59502	1149.1	6.7	1158	15	1155	14	1158	15	0.8
11UPC06_73	72	1.037	0.640	0.013	0.0740	0.0013	0.072078	501.6	7.9	459.9	7.6	713	24	459.9	7.6	8.3
11UPC06_74	95.9	1.299	5.280	0.060	0.3367	0.0053	0.80157	1866.4	9.5	1870	25	1864	8	1864	8	0.3
11UPC06_75	47.9	0.8992	1.908	0.030	0.1815	0.0029	0.58886	1083	11	1075	16	1110	17	1075	16	0.7
11UPC06_76	108.4	1.147	4.370	0.037	0.3061	0.0040	0.62634	1706.2	7	1721	20	1711	12	1711	12	0.6
11UPC06_77	32.6	0.722	4.485	0.070	0.2906	0.0058	0.67494	1728	13	1643	29	1840	16	1840	16	10.7
11UPC06_78	272	2.675	2.672	0.021	0.2274	0.0027	0.75225	1321.2	5.9	1320	14	1327.8	8.6	1327.8	8.6	0.6
11UPC06_79	45.5	1.277	1.868	0.026	0.1727	0.0033	0.29133	1069.4	9.3	1027	18	1170	21	1027	18	4.0
11UPC06_80	63	1.683	2.979	0.033	0.2407	0.0035	0.64415	1401.5	8.4	1390	18	1439	12	1439	12	3.4
11UPC06_81	84.7	1.179	4.900	0.044	0.3206	0.0048	0.65549	1803.8	7.5	1792	23	1841	10	1841	10	2.7
11UPC06_82	482	1.247	1.574	0.025	0.1532	0.0037	0.70931	962	10	919	21	1107	27	919	21	4.5
11UPC06_82	299.5	1.377	1.789	0.019	0.1766	0.0036	0.6585	1041.2	6.9	1048	20	1036	15	1048	20	0.7
11UPC06_83	166	1.851	2.852	0.026	0.2354	0.0034	0.6555	1368.8	6.9	1363	18	1386	13	1386	13	1.7
11UPC06_84	79.2	1.694	5.118	0.039	0.3348	0.0045	0.61975	1839.7	6.3	1864	22	1828.5	9.8	1828.5	9.8	1.9
11UPC06_85	12.24	0.808	3.973	0.067	0.2830	0.0052	0.61851	1629	13	1609	27	1674	17	1674	17	3.9
11UPC06_86	143	2.28	1.641	0.015	0.1672	0.0021	0.40199	985.8	5.7	996	12	990	16	996	12	1.0
11UPC06_87	76.3	0.877	2.658	0.034	0.2281	0.0033	0.67005	1316.1	9.3	1326	18	1327	16	1327	16	0.1
11UPC06_88	116.7	1.514	5.057	0.046	0.3301	0.0049	0.64636	1828.4	7.7	1841	23	1837	12	1837	12	0.2
11UPC06_89	97	1.319	1.853	0.018	0.1788	0.0028	0.53941	1064.2	6.2	1060	15	1094	15	1060	15	0.4
11UPC06_90	46.5	0.829	2.807	0.027	0.2326	0.0039	0.60336	1358	7.4	1347	20	1385	13	1385	13	2.7
11UPC06_91	114.1	1.649	2.839	0.034	0.2292	0.0034	0.73906	1367.3	8.8	1330	18	1440.2	9.1	1440.2	9.1	7.7
11UPC06_92	131.8	2.268	2.703	0.024	0.2156	0.0030	0.63495	1329	6.6	1258	16	1466	14	1466	14	14.2
11UPC06_93	45.7	0.819	1.701	0.019	0.1635	0.0026	0.526	1008.6	7.1	976	14	1111	17	976	14	3.2
11UPC06_94	100.6	0.601	3.470	0.066	0.2415	0.0049	0.77365	1519	15	1394	25	1702	15	1702	15	18.1
11UPC06_95	32.87	3.062	2.493	0.051	0.2002	0.0043	0.75338	1268	15	1180	24	1437	20	1180	24	6.9
11UPC06_96	12.5	0.292	4.900	0.100	0.3226	0.0077	0.66402	1803	17	1801	38	1833	23	1833	23	1.7
11UPC06_97	293	2.369	2.716	0.030	0.2149	0.0036	0.86176	1332.3	8.2	1254	19	1478.4	9.7	1478.4	9.7	15.2

11UPC06_98	34.4	0.872	4.531	0.052	0.2975	0.0044	0.69499	1736.1	9.5	1678	22	1831	11	1831	11	8.4
11UPC06_99	178	2.54	2.937	0.032	0.2393	0.0035	0.74832	1390.9	8.3	1383	18	1431.6	9.4	1431.6	9.4	3.4
11UPC06_100	75.9	0.999	12.970	0.110	0.5082	0.0063	0.61898	2678.1	7.6	2648	27	2711.8	8.9	2711.8	8.9	2.4
11UPC06_101	55.5	0.647	4.988	0.054	0.3281	0.0051	0.76007	1816.5	9.1	1828	25	1827.7	8.8	1827.7	8.8	0.0
11UPC06_102	68.5	1.107	10.767	0.091	0.4708	0.0068	0.67589	2502.7	7.8	2486	30	2531.6	8.3	2531.6	8.3	1.8
11UPC06_103	575	2.321	6.820	0.200	0.3370	0.0130	0.80845	2086	26	1869	62	2328	28	2328	28	19.7
11UPC06_103	417.9	1.247	8.450	0.130	0.4135	0.0097	0.8326	2280	13	2230	44	2330	12	2330	12	4.3
11UPC06_104	27.2	1.57	13.560	0.150	0.5310	0.0100	0.75565	2721	11	2749	44	2722	13	2722	13	1.0
11UPC06_105	44.1	0.892	5.504	0.057	0.3455	0.0054	0.64724	1900.6	8.9	1912	26	1916	12	1916	12	0.2
11UPC06_106	139	2.031	2.925	0.029	0.2359	0.0041	0.63442	1388.7	7.7	1365	22	1445	14	1445	14	5.5
11UPC06_107	244	1.439	1.459	0.018	0.1433	0.0024	0.77312	914.9	7.6	863	13	1065	11	863	13	5.7
11UPC06_108	129	0.945	4.825	0.044	0.3142	0.0056	0.66571	1790.1	8.1	1760	27	1849	11	1849	11	4.8
11UPC06_109	102.8	0.887	2.974	0.031	0.2392	0.0033	0.66351	1401.4	7.7	1382	17	1446.2	8.6	1446.2	8.6	4.4
11UPC06_110	59.4	1.657	4.812	0.054	0.3163	0.0051	0.68754	1788.6	9.4	1771	25	1831	12	1831	12	3.3
11UPC06_111	23.53	0.3728	4.927	0.078	0.3128	0.0046	0.42334	1805	13	1754	22	1885	17	1885	17	6.9
11UPC06_112	687	2.289	1.495	0.032	0.1428	0.0043	0.85814	930	14	860	24	1127	12	860	24	7.5
11UPC06_112	290	1.858	1.924	0.026	0.1822	0.0041	0.75639	1089.3	9.1	1079	22	1108	20	1079	22	0.9
11UPC06_113	115	0.77	3.001	0.031	0.2410	0.0039	0.6955	1408.5	7.8	1391	20	1450	12	1450	12	4.1
11UPC06_114	160.7	1.807	4.315	0.056	0.2874	0.0056	0.8059	1695	11	1628	28	1801	10	1801	10	9.6
11UPC06_115	164.3	0.992	3.015	0.031	0.2436	0.0035	0.64351	1410.8	7.9	1407	18	1447.9	9.9	1447.9	9.9	2.8
11UPC06_116	137.7	1.909	5.015	0.047	0.3187	0.0042	0.67451	1822.4	7.7	1786	20	1882.5	9.8	1882.5	9.8	5.1
11UPC06_117	359.3	0.7135	2.968	0.039	0.2096	0.0038	0.78192	1400.5	9.7	1226	20	1710.8	9.9	1710.8	9.9	28.3
11UPC06_118	85.5	1.338	6.571	0.055	0.3753	0.0050	0.70918	2055	7.4	2054	24	2082.1	7.3	2082.1	7.3	1.3
11UPC06_119	79.5	2.304	4.150	0.048	0.2931	0.0043	0.69959	1663.3	9.4	1656	21	1698	11	1698	11	2.5
11UPC06_120	144.9	1.463	4.145	0.052	0.2892	0.0048	0.78351	1662	10	1637	24	1717	11	1717	11	4.7
11UPC06_121	82.2	0.7459	16.860	0.160	0.5585	0.0072	0.75867	2926.4	9.1	2859	30	2986.3	8.8	2986.3	8.8	4.3
11UPC07_1	142.9	0.733	3.083	0.036	0.2461	0.0034	0.40655	1428.9	8.8	1418	17	1436	12	1436	12	1.3
11UPC07_2	511	2.327	0.525	0.009	0.0668	0.0015	0.70353	428.4	6.2	416.5	9.4	479	16	416.5	9.4	2.8

11UPC07_3	201	0.751	2.387	0.037	0.1951	0.0034	0.68814	1237	11	1149	19	1388	15	1149	19	7.1
11UPC07_4	72	1.81	3.198	0.040	0.2512	0.0041	0.6104	1458	10	1444	21	1464	15	1464	15	1.4
11UPC07_5	44.08	0.714	1.716	0.028	0.1681	0.0031	0.66042	1014	10	1001	17	1043	16	1001	17	1.3
11UPC07_6	95	2.9	2.177	0.033	0.2017	0.0031	0.48681	1174	10	1184	17	1161	19	1184	17	0.9
11UPC07_7	373	0.912	0.940	0.110	0.0762	0.0013	0.68373	650	56	473.1	7.9	1200	200	473.1	7.9	27.2
11UPC07_8	380	1.338	0.485	0.007	0.0616	0.0012	0.69551	401.5	4.8	385.4	7.6	492	19	385.4	7.6	4.0
11UPC07_9	279	0.88	11.250	0.150	0.4518	0.0061	0.72394	2543	12	2402	27	2646.8	9.3	2646.8	9.3	9.2
11UPC07_10	394	3.801	1.596	0.019	0.1591	0.0025	0.57864	968.2	7.4	952	14	1007	14	952	14	1.7
11UPC07_11	297	3.386	1.892	0.024	0.1811	0.0027	0.6963	1078.7	8.6	1075	14	1080	11	1075	14	0.3
11UPC07_12	296	1.3	0.556	0.011	0.0716	0.0013	0.42983	448.4	7.2	445.7	7.7	471	24	445.7	7.7	0.6
11UPC07_13	126.6	1.023	3.668	0.042	0.2513	0.0042	0.53043	1565.2	9.4	1444	21	1737	17	1737	17	16.9
11UPC07_14	105.5	1.56	1.578	0.024	0.1582	0.0023	0.57495	960.9	9.4	946	13	978	18	946	13	1.6
11UPC07_15	71.7	0.855	4.495	0.087	0.2253	0.0051	0.83924	1731	15	1309	27	2268	16	DISC	DISC	42.3
11UPC07_16	113	1.5	3.251	0.050	0.2552	0.0041	0.72975	1468	12	1468	22	1461	14	1461	14	0.5
11UPC07_17	100.8	1.005	3.087	0.040	0.2459	0.0037	0.58729	1430	10	1417	19	1441	14	1441	14	1.7
11UPC07_18	102.7	0.634	0.667	0.015	0.0829	0.0014	0.56255	518.2	9	513.3	8.3	553	29	513.3	8.3	0.9
11UPC07_19	117.8	1.284	3.020	0.046	0.2433	0.0033	0.55508	1412	12	1405	18	1417	13	1417	13	0.8
11UPC07_20	139.2	1.282	2.845	0.034	0.2351	0.0034	0.51717	1366.7	9	1361	17	1375	15	1375	15	1.0
11UPC07_21	182.3	1.409	4.011	0.059	0.2822	0.0045	0.71169	1637	12	1602	23	1685	13	1685	13	4.9
11UPC07_22	83.4	2.301	4.577	0.062	0.2931	0.0044	0.5665	1746	11	1659	22	1839	18	1839	18	9.8
11UPC07_23	73.8	1.394	4.221	0.055	0.2948	0.0046	0.54635	1677	11	1670	23	1691	16	1691	16	1.2
11UPC07_24	98	1.628	4.465	0.077	0.2854	0.0061	0.71265	1724	14	1617	30	1844	15	1844	15	12.3
11UPC07_25	34.81	1.272	2.109	0.031	0.1958	0.0036	0.26803	1151	10	1152	20	1152	27	1152	20	0.1
11UPC07_26	115.9	2.117	2.834	0.079	0.2335	0.0048	0.81606	1361	22	1356	26	1361	26	1361	26	0.4
11UPC07_27	46.5	1.947	2.270	0.300	0.1832	0.0040	0.78141	1147	44	1084	22	1240	72	1084	22	5.5
11UPC07_28	203	1.982	2.798	0.040	0.2227	0.0035	0.57335	1354	11	1296	19	1441	16	1441	16	10.1
11UPC07_29	288.6	1.038	0.510	0.007	0.0667	0.0011	0.56393	418	4.5	417.2	6.4	419	19	417.2	6.4	0.2
11UPC07_30	84.6	1.995	3.086	0.049	0.2472	0.0041	0.62468	1428	12	1424	21	1436	14	1436	14	0.8
11UPC07_31	55.8	1.44	2.563	0.048	0.2117	0.0041	0.73823	1288	14	1237	22	1389	18	1389	18	10.9
11UPC07_32	187.2	1.38	0.606	0.009	0.0711	0.0011	0.49611	480.9	5.6	442.8	6.8	679	23	442.8	6.8	7.9

11UPC07_33	20.84	0.4889	4.902	0.084	0.3189	0.0057	0.66185	1801	14	1783	28	1832	15	1832	15	2.7
11UPC07_35	5.5	0.3225	4.770	0.150	0.3006	0.0075	0.030135	1773	25	1692	37	1851	49	1851	49	8.6
11UPC07_36	137	1.636	2.186	0.031	0.2000	0.0036	0.63065	1177	10	1175	19	1197	17	1175	19	0.2
11UPC07_37	243	1.252	2.190	0.025	0.1998	0.0030	0.56081	1177.3	7.9	1174	16	1213	18	1174	16	0.3
11UPC07_38	32.6	0.619	13.160	0.250	0.5000	0.0120	0.64794	2693	17	2617	52	2770	29	2770	29	5.5
11UPC07_39	143	0.598	4.599	0.041	0.3101	0.0045	0.63944	1748.5	7.5	1740	22	1769	12	1769	12	1.6
11UPC07_40	147.8	0.716	1.648	0.023	0.1640	0.0025	0.51752	987.9	8.7	979	14	1012	18	979	14	0.9
11UPC07_41	110.5	1.28	1.742	0.025	0.1686	0.0025	0.51898	1024.5	9.2	1004	14	1046	16	1004	14	2.0
11UPC07_42	381	1.236	0.531	0.007	0.0654	0.0011	0.5841	433.1	4.5	408.3	6.5	578	16	408.3	6.5	5.7
11UPC07_43	70.8	0.919	4.513	0.060	0.3040	0.0047	0.43711	1734	11	1710	23	1762	18	1762	18	3.0
11UPC07_44	107.7	1.51	4.841	0.077	0.3134	0.0047	0.65406	1790	13	1757	23	1838	10	1838	10	4.4
11UPC07_45	55.2	0.838	2.998	0.042	0.2449	0.0039	0.48185	1407	10	1412	20	1415	14	1415	14	0.2
11UPC07_46	84.3	1.024	2.322	0.032	0.2078	0.0033	0.55947	1218.1	9.7	1216	18	1221	19	1221	19	0.4
11UPC07_47	74.7	1.414	0.658	0.014	0.0819	0.0016	0.36656	512.6	8.4	507.6	9.5	552	30	507.6	9.5	1.0
11UPC07_48	79.7	1.4	3.182	0.046	0.2526	0.0044	0.77606	1452	11	1451	23	1467	12	1467	12	1.1
11UPC07_49	129	1.366	8.240	0.250	0.3796	0.0089	0.87721	2251	28	2072	41	2431	24	2431	24	14.8
11UPC07_50	74	1.397	3.081	0.047	0.2444	0.0053	0.64939	1427	12	1412	27	1459	20	1459	20	3.2
11UPC07_52	37.9	1.264	2.129	0.064	0.1845	0.0041	0.53608	1158	21	1094	22	1297	35	1094	22	5.5
11UPC07_53	95.3	1.128	12.090	0.130	0.4819	0.0069	0.66962	2612	10	2534	30	2680	12	2680	12	5.4
11UPC07_54	211	1.466	1.904	0.055	0.1460	0.0049	0.90813	1079	20	878	27	1525	20	878	27	18.6
11UPC07_55	194	1.028	2.841	0.057	0.2263	0.0049	0.8463	1365	15	1314	26	1472	14	1472	14	10.7
11UPC07_56	44.9	0.841	1.789	0.048	0.1657	0.0027	0.3564	1039	17	988	15	1166	38	988	15	4.9
11UPC07_57	40.5	1.406	13.180	0.150	0.5158	0.0070	0.61539	2693	11	2680	30	2713	12	2713	12	1.2
11UPC07_58	135.6	0.611	0.617	0.011	0.0775	0.0013	0.16044	487.5	6.9	481	7.5	532	26	481	7.5	1.3
11UPC07_60	315.9	5.17	1.762	0.023	0.1710	0.0027	0.77033	1032.1	8.3	1017	15	1067	12	1017	15	1.5
11UPC07_61	166.3	2.56	3.977	0.049	0.2791	0.0040	0.63994	1629	10	1586	20	1693	13	1693	13	6.3
11UPC07_62	154.6	1.367	0.714	0.012	0.0848	0.0015	0.44805	546.9	7	524.9	9.2	667	24	524.9	9.2	4.0
11UPC07_63	202	2.161	3.095	0.039	0.2432	0.0033	0.59174	1430.5	9.7	1403	17	1474	15	1474	15	4.8
11UPC07_64	47.8	0.875	4.220	0.100	0.2927	0.0067	0.70522	1676	20	1654	34	1701	17	1701	17	2.8
11UPC07_65	53.1	1.161	1.629	0.028	0.1612	0.0027	0.5348	981	11	963	15	1045	22	963	15	1.8

11UPC07_66	180	1.109	12.750	0.160	0.4986	0.0066	0.52415	2662	11	2607	28	2714	11	2714	11	3.9
11UPC07_67	43.2	1.11	11.410	0.140	0.4897	0.0077	0.61647	2556	11	2568	33	2555	12	2555	12	0.5
11UPC07_68	37.4	0.551	3.160	0.054	0.2447	0.0040	0.47208	1446	13	1411	21	1503	22	1503	22	6.1
11UPC07_69	75.2	1.12	5.357	0.065	0.3305	0.0050	0.50923	1877	10	1840	24	1936	14	1936	14	5.0
11UPC07_70	101.5	1.027	9.650	0.100	0.4556	0.0061	0.53116	2401.4	9.6	2419	27	2391	12	2391	12	1.2
11UPC07_71	93.3	0.608	6.614	0.076	0.3710	0.0055	0.70236	2060	10	2033	26	2097	10	2097	10	3.1
11UPC07_72	164.3	0.94	2.838	0.037	0.2385	0.0031	0.64936	1364.9	9.6	1379	16	1359	14	1359	14	1.5
11UPC07_74	130	0.543	3.340	0.110	0.2498	0.0067	0.80868	1486	25	1436	35	1565	23	1565	23	8.2
11UPC07_75	100	0.871	2.060	0.030	0.1908	0.0035	0.58634	1135	10	1125	19	1165	17	1125	19	0.9
11UPC07_76	34.2	0.855	1.874	0.036	0.1766	0.0039	0.46274	1072	13	1047	21	1157	27	1047	21	2.3
11UPC07_77	562	2.86	1.869	0.036	0.1727	0.0036	0.83489	1070	13	1027	20	1171	13	1027	20	4.0
11UPC07_78	199	1.515	0.623	0.009	0.0777	0.0011	0.60022	492.4	5.5	482.3	6.7	558	13	482.3	6.7	2.1
11UPC07_79	35.9	4.97	1.737	0.031	0.1671	0.0025	0.457	1022	12	996	14	1085	20	996	14	2.5
11UPC07_81	78.5	1.297	2.064	0.033	0.1935	0.0032	0.67056	1136	11	1142	18	1137	15	1142	18	0.5
11UPC07_82	180.9	1.145	1.539	0.023	0.1558	0.0029	0.60614	946.5	8.9	933	16	989	16	933	16	1.4
11UPC07_83	72.7	1.091	1.762	0.032	0.1741	0.0031	0.68275	1032	12	1034	17	1037	15	1034	17	0.2
11UPC07_84	119.1	1.556	4.964	0.072	0.3139	0.0054	0.694	1812	12	1763	27	1866	16	1866	16	5.5
11UPC07_85	108.7	1.459	2.220	0.270	0.1803	0.0034	0.65319	1136	52	1068	18	1208	98	1068	18	6.0
11UPC07_86	132	1.875	4.498	0.060	0.3108	0.0045	0.57977	1731	11	1744	22	1746	14	1746	14	0.1
11UPC07_87	212	1.568	0.727	0.010	0.0891	0.0015	0.5387	554.7	5.7	550	8.7	585	20	550	8.7	0.8
11UPC07_88	273	1.5	2.608	0.050	0.2211	0.0043	0.92569	1301	14	1287	23	1328	12	1328	12	3.1
11UPC07_89	68.7	0.407	13.260	0.190	0.5150	0.0100	0.63536	2702	13	2674	42	2725	14	2725	14	1.9
11UPC07_90	452	1.315	4.184	0.092	0.2788	0.0070	0.86806	1668	18	1583	35	1796	14	1796	14	11.9
11UPC07_91	193.1	2.361	1.739	0.026	0.1676	0.0027	0.69516	1022.1	9.7	998	15	1067	15	998	15	2.4
11UPC07_92	180	1.234	0.559	0.009	0.0725	0.0012	0.50831	450.8	5.5	450.9	7	462	21	450.9	7	0.0
11UPC07_93	243	1.146	0.515	0.009	0.0661	0.0011	0.40147	421.4	5.7	412.7	6.4	464	28	412.7	6.4	2.1
11UPC07_94	75	0.689	1.756	0.023	0.1708	0.0024	0.44846	1029.9	8.1	1016	13	1059	17	1016	13	1.3
11UPC07_95	106.8	1.373	2.812	0.040	0.2326	0.0026	0.36091	1358	11	1348	14	1369	16	1369	16	1.5
11UPC07_96	175.3	1.512	13.560	0.150	0.5183	0.0064	0.65392	2720	10	2691	27	2741	9.1	2741	9.1	1.8
11UPC07_97	142	1.64	3.034	0.041	0.2440	0.0044	0.66456	1415	10	1407	23	1440	16	1440	16	2.3

11UPC07_98	198.8	0.653	2.165	0.024	0.2000	0.0025	0.47851	1170.4	7.4	1175	14	1177	15	1175	14	0.4
11UPC07_99	203	1.719	2.994	0.049	0.2426	0.0048	0.85907	1407	13	1399	25	1430	15	1430	15	2.2
11UPC07_100	177	1.18	3.272	0.061	0.2606	0.0042	0.76221	1475	14	1492	21	1465	16	1465	16	1.8
11UPC07_101	535	5.96	1.817	0.022	0.1752	0.0025	0.70686	1052.3	8.2	1041	14	1091	13	1041	14	1.1
11UPC07_102	283	1.45	1.905	0.026	0.1845	0.0030	0.78282	1082.2	9.1	1091	16	1083	17	1091	16	0.8
11UPC07_103	105.7	1.254	5.055	0.067	0.3278	0.0050	0.63495	1832	11	1827	24	1835	11	1835	11	0.4
11UPC07_104	205.7	0.857	0.545	0.007	0.0702	0.0010	0.34639	441.8	4.8	437.3	6.1	490	21	437.3	6.1	1.0
11UPC07_105	152.1	2.394	4.789	0.054	0.3124	0.0041	0.65352	1783.4	9.7	1752	20	1810	11	1810	11	3.2
11UPC07_106	93.9	0.92	0.491	0.009	0.0649	0.0010	0.15892	404.9	6.3	405.4	6.2	438	29	405.4	6.2	0.1
11UPC07_107	199	1.586	2.992	0.040	0.2411	0.0038	0.69226	1405	10	1392	20	1417	11	1417	11	1.8
11UPC07_108	271	2.08	2.012	0.043	0.1864	0.0048	0.77088	1119	15	1101	26	1153	18	1101	26	1.6
11UPC07_109	41.7	0.5514	4.833	0.072	0.3171	0.0053	0.61302	1789	13	1775	26	1817	13	1817	13	2.3
11UPC07_110	37.45	6.51	1.676	0.029	0.1670	0.0030	0.38102	1002	10	995	17	1019	26	995	17	0.7
11UPC07_111	89.5	0.879	4.309	0.062	0.2808	0.0042	0.67997	1694	12	1595	21	1843	14	1843	14	13.5
11UPC07_112	211	0.79	6.700	0.690	0.2935	0.0065	0.75848	2031	86	1658	32	2450	150	DISC	DISC	32.3
11UPC07_113	80.3	1.059	5.081	0.062	0.3215	0.0046	0.62438	1832	10	1797	22	1858	14	1858	14	3.3
11UPC07_114	505	1.808	0.454	0.012	0.0525	0.0016	0.90172	379.3	8.1	330	10	719	18	330	10	13.0
11UPC07_116	107	1.043	4.091	0.059	0.2942	0.0055	0.66182	1651	12	1665	27	1659	19	1659	19	0.4
11UPC07_117	149.8	1.815	4.566	0.070	0.3054	0.0052	0.72955	1742	13	1717	26	1779.8	9.9	1779.8	9.9	3.5
11UPC07_119	231	3.05	0.509	0.013	0.0639	0.0034	0.77436	418.6	9.3	399	21	620	110	399	21	4.7
11UPC07_120	178.2	2.065	4.431	0.054	0.3013	0.0052	0.66527	1717	10	1697	26	1745	14	1745	14	2.8
11UPC07_121	41.1	0.38	12.910	0.160	0.5083	0.0069	0.62607	2674	11	2648	30	2690	13	2690	13	1.6
11UPC08_1	802	4.14	4.002	0.058	0.2604	0.0040	0.64932	1634	12	1491	21	1813.5	9	1813.5	9	17.8
11UPC08_2	7.67	1.427	1.848	0.065	0.1745	0.0029	0.06562	1059	21	1037	16	1100	40	1037	16	2.1
11UPC08_3	116	1.138	1.911	0.020	0.1839	0.0020	0.55952	1085.5	7.2	1088	11	1082.1	9.8	1088	11	0.2
11UPC08_4	265	1.831	4.151	0.028	0.2896	0.0024	0.68047	1664.1	5.5	1640	12	1710.2	6.7	1710.2	6.7	4.1
11UPC08_5	353.4	1.48	3.735	0.042	0.2584	0.0037	0.63182	1578.6	8.9	1481	19	1713	12	1713	12	13.5
11UPC08_6	277.4	0.587	1.728	0.012	0.1681	0.0014	0.52084	1019	4.6	1001.3	7.5	1060.3	9.3	1001.3	7.5	1.7

11UPC08_7	57.4	1.29	1.848	0.023	0.1804	0.0019	0.6756	1062	8	1069	10	1058	11	1069	10	0.7
11UPC08_8	541	7.3	4.150	0.068	0.2770	0.0059	0.88729	1666	13	1575	30	1780.6	9.1	1780.6	9.1	11.5
11UPC08_8	159.7	2.02	5.113	0.092	0.3196	0.0062	0.87459	1838	15	1787	30	1899	13	1899	13	5.9
11UPC08_9	135.5	1.374	4.145	0.076	0.2661	0.0039	0.52295	1662	15	1521	20	1852	27	1852	27	17.9
11UPC08_9	86.1	2.506	4.290	0.058	0.2972	0.0034	0.65423	1691	11	1677	17	1704	13	1704	13	1.6
11UPC08_10	126.8	1.123	1.791	0.027	0.1621	0.0019	0.72648	1041.5	9.8	969	10	1204.4	9.5	969	10	7.0
11UPC08_10	147.1	0.975	2.029	0.043	0.1821	0.0043	0.86213	1124	15	1078	23	1226	14	1078	23	4.1
11UPC08_11	63	0.695	1.912	0.020	0.1829	0.0017	0.6063	1084.8	6.9	1082.5	9.4	1095	11	1082.5	9.4	0.2
11UPC08_12	63.3	0.974	1.949	0.040	0.1809	0.0018	0.52836	1097	13	1072	10	1154	29	1072	10	2.3
11UPC08_13	146.5	1.89	1.881	0.012	0.1819	0.0016	0.50616	1074.8	4.3	1077.5	8.7	1080.4	9.1	1077.5	8.7	0.3
11UPC08_15	374	2.66	4.219	0.034	0.2798	0.0027	0.62642	1677.5	6.7	1590	14	1789.2	8.8	1789.2	8.8	11.1
11UPC08_16	287	1.3	3.086	0.031	0.2458	0.0024	0.8135	1428.6	7.7	1417	13	1442.9	8.6	1442.9	8.6	1.8
11UPC08_17	97	1.191	4.147	0.034	0.2945	0.0026	0.66232	1664.1	6.6	1664	13	1677.7	7.8	1677.7	7.8	0.8
11UPC08_18	397	4.65	4.801	0.042	0.3156	0.0032	0.73999	1784.7	7.4	1768	15	1801.4	5.9	1801.4	5.9	1.9
11UPC08_19	25.7	0.526	1.994	0.035	0.1920	0.0027	0.50926	1112	12	1132	15	1100	19	1132	15	1.8
11UPC08_20	73.9	2.503	3.086	0.026	0.2471	0.0020	0.40282	1428.8	6.4	1424	10	1446	11	1446	11	1.5
11UPC08_21	265	2.16	2.005	0.017	0.1882	0.0019	0.74882	1117.6	5.6	1113	11	1134.7	8.5	1113	11	0.4
11UPC08_22	71.2	1.154	2.796	0.025	0.2321	0.0024	0.73481	1354.1	6.6	1345	13	1369	10	1369	10	1.8
11UPC08_23	247.1	3.069	4.140	0.049	0.2831	0.0037	0.77507	1661.9	9.7	1607	18	1735	10	1735	10	7.4
11UPC08_23	157.6	2.275	4.514	0.057	0.3126	0.0049	0.80316	1733	11	1757	23	1715.7	8.9	1715.7	8.9	2.4
11UPC08_24	95.5	1.214	2.072	0.021	0.1965	0.0019	0.54705	1139.3	6.8	1158	10	1113	12	1158	10	1.6
11UPC08_25	67.8	0.951	2.010	0.022	0.1896	0.0022	0.44689	1118.4	7.4	1119	12	1132	13	1119	12	0.1
11UPC08_26	138.5	0.628	3.376	0.040	0.2406	0.0036	0.69836	1498.5	9.3	1389	18	1659.4	7.1	1659.4	7.1	16.3
11UPC08_27	84.5	0.6283	1.919	0.018	0.1849	0.0019	0.48476	1089.1	6.3	1094	10	1079	12	1094	10	0.4
11UPC08_29	72.1	1.717	1.999	0.018	0.1896	0.0019	0.36332	1115.7	6	1119	10	1123	12	1119	10	0.3
11UPC08_30	100.1	1.663	4.800	0.030	0.3213	0.0026	0.59643	1784.7	5.2	1796	13	1783.8	7.5	1783.8	7.5	0.7
11UPC08_31	589	3.42	3.369	0.064	0.2242	0.0048	0.90708	1496	15	1304	25	1786	12	1786	12	27.0
11UPC08_31	535	12.4	5.100	0.110	0.3113	0.0073	0.87634	1838	18	1746	36	1934	12	1934	12	9.7
11UPC08_32	254.7	13.14	4.772	0.044	0.3066	0.0031	0.75028	1779.8	7.7	1724	15	1820.7	7.8	1820.7	7.8	5.3
11UPC08_33	53	0.7958	10.661	0.099	0.4460	0.0053	0.7834	2493.3	8.6	2377	24	2591.9	6.8	2591.9	6.8	8.3

11UPC08_34	170.4	3.461	3.118	0.025	0.2484	0.0024	0.57015	1436.8	6.2	1430	13	1460.6	9.1	1460.6	9.1	2.1
11UPC08_35	315.7	2.731	8.100	0.110	0.3832	0.0052	0.8854	2240	13	2091	24	2389.8	7.9	2389.8	7.9	12.5
11UPC08_36	53.8	0.929	2.021	0.021	0.1921	0.0016	0.1139	1123.1	6.9	1132.5	8.8	1118.1	9.7	1132.5	8.8	0.8
11UPC08_37	77.5	1.514	1.853	0.019	0.1821	0.0017	0.40699	1064.1	6.7	1078.3	9.1	1062	13	1078.3	9.1	1.3
11UPC08_38	41.8	1.099	1.995	0.022	0.1895	0.0022	0.46876	1113.4	7.5	1119	12	1111	11	1119	12	0.5
11UPC08_39	94.5	1.473	1.954	0.019	0.1878	0.0022	0.7006	1099.5	6.4	1109	12	1090.7	9.7	1109	12	0.9
11UPC08_40	73.3	1.439	2.036	0.022	0.1926	0.0020	0.58365	1128.1	7.4	1135	11	1119	10	1135	11	0.6
11UPC08_41	68.5	0.867	3.220	0.028	0.2565	0.0027	0.42992	1461.6	6.7	1472	14	1428	12	1428	12	3.1
11UPC08_42	21.4	0.885	1.991	0.028	0.1930	0.0023	0.27869	1112.9	9.5	1138	12	1088	17	1138	12	2.3
11UPC08_43	59.6	1.274	1.937	0.032	0.1885	0.0029	0.85447	1093	11	1113	16	1064	11	1113	16	1.8
11UPC08_44	103.4	0.948	1.900	0.016	0.1841	0.0018	0.53582	1080.7	5.5	1089.1	9.9	1066.8	7	1089.1	9.9	0.8
11UPC08_45	80.2	1.514	1.885	0.020	0.1836	0.0020	0.59427	1075.4	7.1	1087	11	1065	13	1087	11	1.1
11UPC08_46	73.8	1.115	12.470	0.140	0.4961	0.0071	0.60496	2640	11	2596	31	2670	11	2670	11	2.8
11UPC08_47	46.3	0.776	5.860	0.059	0.3649	0.0036	0.6696	1955.7	8.9	2005	17	1905.1	7.9	1905.1	7.9	5.2
11UPC08_48	163	1.043	1.941	0.021	0.1839	0.0023	0.66749	1094.9	7.1	1089	13	1110	13	1089	13	0.5
11UPC08_49	87.1	1.579	1.842	0.024	0.1755	0.0019	0.30411	1060.1	8.6	1042	10	1110	13	1042	10	1.7
11UPC08_50	579	5.12	4.634	0.040	0.3036	0.0035	0.86802	1755	7.1	1709	17	1811.4	7.1	1811.4	7.1	5.7
11UPC08_51	72.7	0.204	14.250	0.420	0.3663	0.0060	0.82352	2766	30	2011	28	3384	28	DISC	DISC	40.6
11UPC08_52	61.1	1.038	1.692	0.019	0.1646	0.0018	0.47534	1006.1	6.9	982	10	1060	13	982	10	2.4
11UPC08_53	43.1	0.5839	3.119	0.037	0.2507	0.0029	0.35427	1436.7	9.2	1442	15	1431	12	1431	12	0.8
11UPC08_54	249	1.358	2.050	0.020	0.1930	0.0024	0.73248	1132.1	6.6	1137	13	1131.4	9.6	1137	13	0.4
11UPC08_55	71.7	0.975	1.907	0.015	0.1854	0.0020	0.52212	1084	5.5	1096	11	1073	13	1096	11	1.1
11UPC08_56	246	1.107	2.656	0.023	0.2236	0.0023	0.72059	1316.8	6.6	1301	12	1342.4	8.6	1342.4	8.6	3.1
11UPC08_57	30.1	1.022	0.927	0.017	0.1085	0.0016	0.26827	666.5	8.7	663.7	9.3	671	26	663.7	9.3	0.4
11UPC08_58	138.5	0.921	5.030	0.039	0.3264	0.0027	0.67553	1823.9	6.6	1821	13	1836.9	6.8	1836.9	6.8	0.9
11UPC08_59	65.6	1.029	4.317	0.038	0.3035	0.0032	0.1957	1696.2	7.3	1708	16	1678.9	9.3	1678.9	9.3	1.7
11UPC08_60	178.3	0.7	1.930	0.017	0.1859	0.0019	0.62894	1091.2	5.9	1099	10	1077.6	9.1	1099	10	0.7
11UPC08_61	256	3.42	1.868	0.017	0.1790	0.0017	0.67931	1069.4	6.1	1061.5	9.2	1082.5	9.7	1061.5	9.2	0.7
11UPC08_62	258	7.9	4.689	0.067	0.3129	0.0046	0.85903	1765	12	1754	22	1778.1	7.9	1778.1	7.9	1.4
11UPC08_63	364.3	0.6154	14.390	0.130	0.5433	0.0064	0.73373	2775.5	8.5	2800	27	2767.2	8.9	2767.2	8.9	1.2

11UPC08_64	324	2.63	1.978	0.030	0.1862	0.0030	0.93488	1107	10	1101	16	1121.7	9.7	1101	16	0.5
11UPC08_65	319	4.33	4.856	0.039	0.3220	0.0029	0.79125	1794.2	6.8	1799	14	1786.8	6.3	1786.8	6.3	0.7
11UPC08_66	227	7.6	4.886	0.038	0.3258	0.0029	0.61379	1799.4	6.5	1818	14	1778.4	9.3	1778.4	9.3	2.2
11UPC08_67	70.1	1.059	3.884	0.032	0.2718	0.0027	0.54052	1610	6.7	1550	14	1687.2	9.8	1687.2	9.8	8.1
11UPC08_69	206	1.157	2.023	0.028	0.1884	0.0032	0.86787	1124	9.3	1112	18	1155	12	1112	18	1.1
11UPC08_70	66.1	1.08	4.091	0.042	0.2940	0.0033	0.5522	1651.8	8.5	1661	16	1637.9	9.2	1637.9	9.2	1.4
11UPC08_71	231	1.315	1.921	0.019	0.1827	0.0024	0.77939	1088.1	6.8	1082	13	1101.1	8.4	1082	13	0.6
11UPC08_72	87.3	1.708	1.903	0.018	0.1826	0.0017	0.55508	1081.7	6.3	1080.8	9.1	1084	10	1080.8	9.1	0.1
11UPC08_73	162	1.164	1.882	0.020	0.1772	0.0018	0.69144	1074.4	6.9	1053	10	1127	15	1053	10	2.0
11UPC08_74	199	1.928	1.968	0.015	0.1871	0.0014	0.55366	1105	5.1	1105.6	7.8	1096	9.3	1105.6	7.8	0.1
11UPC08_75	159.6	1.522	1.978	0.015	0.1890	0.0017	0.48634	1107.8	4.9	1115.9	9.3	1089	11	1115.9	9.3	0.7
11UPC08_76	241.2	1.785	5.390	0.250	0.3075	0.0045	0.71534	1876	38	1728	22	2050	61	2050	61	15.7
11UPC08_77	128	1.28	3.447	0.050	0.2622	0.0037	0.65118	1514	11	1500	19	1519	16	1519	16	1.3
11UPC08_78	27.6	0.935	1.775	0.024	0.1686	0.0017	0.22239	1035.6	8.9	1004.5	9.2	1106	17	1004.5	9.2	3.0
11UPC08_79	46.5	1.255	1.759	0.021	0.1688	0.0017	0.27321	1029.9	7.6	1005.4	9.1	1084	15	1005.4	9.1	2.4
11UPC08_80	127.3	0.7629	1.860	0.015	0.1748	0.0016	0.62399	1066.9	5.3	1038.5	8.9	1121.2	9.8	1038.5	8.9	2.7
11UPC08_81	330	1.323	3.106	0.029	0.2404	0.0026	0.71156	1434.8	7.1	1389	14	1491	12	1491	12	6.8
11UPC08_82	129	1.11	2.011	0.023	0.1918	0.0023	0.70022	1119.5	7.7	1131	13	1093	11	1131	13	1.0
11UPC08_83	83.7	2.12	4.856	0.049	0.3236	0.0033	0.54161	1795.1	8.3	1809	16	1774	10	1774	10	2.0
11UPC08_84	16.54	1.257	1.805	0.030	0.1725	0.0022	0.062707	1048	11	1026	12	1082	26	1026	12	2.1
11UPC08_85	14.47	1.975	1.885	0.049	0.1776	0.0030	0.6954	1077	17	1053	16	1133	24	1053	16	2.2
11UPC08_86	115.5	2.282	1.868	0.019	0.1795	0.0021	0.71278	1069.5	6.7	1064	11	1075	11	1064	11	0.5
11UPC08_87	29.33	1.597	2.511	0.034	0.2164	0.0022	0.41148	1274.4	9.8	1263	12	1270	16	1270	16	0.6
11UPC08_88	111.3	1.262	1.966	0.028	0.1851	0.0026	0.62727	1104.2	9.6	1095	14	1129	16	1095	14	0.8
11UPC08_89	63.6	0.818	1.960	0.024	0.1855	0.0020	0.56699	1102.2	8.1	1097	11	1093	10	1097	11	0.5
11UPC08_90	152	1.45	1.927	0.019	0.1848	0.0021	0.66182	1091.2	6.7	1093	11	1067	10	1093	11	0.2
11UPC08_91	203	1.166	4.992	0.051	0.3305	0.0039	0.73102	1817.2	8.6	1840	19	1783.3	8.8	1783.3	8.8	3.2
11UPC08_92	127	0.94	2.119	0.026	0.1951	0.0021	0.38772	1154.5	8.3	1149	11	1157	19	1149	11	0.5
11UPC08_93	53.3	1.496	1.953	0.026	0.1801	0.0028	0.46498	1099	8.8	1067	15	1159	14	1067	15	2.9
11UPC08_94	51.6	1.812	1.828	0.025	0.1755	0.0023	0.48819	1056	9.2	1042	13	1076	17	1042	13	1.3

11UPC08_95	84.2	1.304	2.707	0.027	0.2293	0.0026	0.82337	1329.9	7.5	1331	14	1322	10	1322	10	0.7
11UPC08_96	144.9	0.557	1.457	0.030	0.1398	0.0032	0.65247	912	12	843	18	1079	21	843	18	7.6
11UPC08_96	501	1.501	1.753	0.019	0.1660	0.0028	0.78908	1028.1	7.1	990	15	1106	13	990	15	3.7
11UPC08_97	93	1.662	2.420	0.190	0.1801	0.0029	0.66804	1225	48	1067	16	1500	100	1067	16	12.9
11UPC08_98	40.6	1.115	1.978	0.030	0.1883	0.0025	0.38825	1107	10	1112	13	1078	20	1112	13	0.5
11UPC08_99	84	1.599	3.069	0.041	0.2460	0.0030	0.7599	1425	10	1417	15	1439	11	1439	11	1.5
11UPC08_100	339	2.91	4.857	0.047	0.3181	0.0039	0.67672	1794.6	8.2	1780	19	1794.6	9.1	1794.6	9.1	0.8
11UPC08_101	495	1.1288	2.271	0.027	0.1678	0.0026	0.85937	1203.8	8.3	1000	14	1579.8	9.9	1000	14	16.9
11UPC08_102	392	2.638	1.931	0.016	0.1803	0.0019	0.74741	1092.5	5.4	1069	10	1134	8.2	1069	10	2.2
11UPC08_103	61	0.768	4.512	0.051	0.3111	0.0046	0.71227	1732.5	9.4	1746	23	1708	10	1708	10	2.2
11UPC08_104	221	1.536	1.987	0.019	0.1847	0.0019	0.52793	1111.6	6.3	1092	10	1134	12	1092	10	1.8
11UPC08_105	22.75	0.817	4.274	0.070	0.2892	0.0044	0.27777	1687	14	1637	22	1751	16	1751	16	6.5
11UPC08_106	15.23	1.743	1.737	0.032	0.1590	0.0028	0.13387	1024	12	951	16	1172	27	951	16	7.1
11UPC08_107	38.8	0.988	1.976	0.030	0.1834	0.0025	0.52885	1108	10	1085	13	1158	17	1085	13	2.1
11UPC08_108	64.6	1.105	1.906	0.022	0.1817	0.0024	0.52025	1082.5	7.8	1076	13	1087	15	1076	13	0.6
11UPC08_109	182	1.418	3.219	0.029	0.2547	0.0031	0.71656	1461.6	6.9	1462	16	1451.6	9.2	1451.6	9.2	0.7
11UPC08_110	286.3	1.77	4.908	0.038	0.3197	0.0026	0.70656	1803.3	6.5	1788	13	1805	6.4	1805	6.4	0.9
11UPC08_111	104.7	2.369	5.294	0.042	0.3342	0.0031	0.69269	1867.5	6.8	1859	15	1863.3	6.3	1863.3	6.3	0.2
11UPC08_112	373	2.72	4.705	0.068	0.3111	0.0050	0.85746	1767	12	1750	24	1787	10	1787	10	2.1
11UPC08_113	37.8	1.308	2.004	0.034	0.1898	0.0027	0.91893	1116	12	1120	15	1101	14	1120	15	0.4
11UPC08_114	130.8	1.259	3.179	0.034	0.2547	0.0028	0.79508	1452.5	8.3	1463	14	1425.6	6.2	1425.6	6.2	2.6
11UPC08_115	41.6	0.903	2.222	0.035	0.1974	0.0030	0.61566	1188	11	1161	16	1219	17	1161	16	2.3
11UPC08_117	141.5	1.806	4.525	0.042	0.3070	0.0037	0.65479	1736.2	7.9	1725	18	1733	12	1733	12	0.5
11UPC08_118	110.2	1.261	2.067	0.021	0.1920	0.0024	0.73291	1137.5	6.8	1132	13	1134.1	8.5	1132	13	0.5
11UPC08_119	53.7	2.029	1.882	0.020	0.1755	0.0020	0.53711	1074.2	7.2	1042	11	1122	14	1042	11	3.0
11UPC08_120	161.3	0.933	4.892	0.040	0.3240	0.0035	0.60859	1800.4	6.9	1811	17	1783	11	1783	11	1.6
11UPC08_121	13.9	1.035	4.661	0.063	0.3143	0.0040	0.451	1759	11	1761	20	1749	16	1749	16	0.7
11UPC08_122	31.9	1.55	12.160	0.200	0.4814	0.0087	0.87596	2617	15	2536	39	2669.2	8.9	2669.2	8.9	5.0
11UPC08_123	24.68	0.86	1.823	0.027	0.1757	0.0021	0.32019	1054.3	9.5	1043	11	1087	19	1043	11	1.1

11UPC09_1	151	1.709	1.907	0.017	0.1829	0.0015	0.59263	1083.4	6	1082.8	8.2	1077.1	9.1	1082.8	8.2	0.1
11UPC09_2	68.2	1.022	1.956	0.025	0.1839	0.0017	0.59183	1100.8	8.7	1088	9.2	1109	13	1088	9.2	1.2
11UPC09_3	84.1	1.104	2.096	0.024	0.1993	0.0021	0.60627	1147.7	7.7	1173	11	1113	12	1173	11	2.2
11UPC09_4	65.2	1.192	1.962	0.022	0.1849	0.0018	0.27343	1101.9	7.6	1096.1	9.3	1100	14	1096.1	9.3	0.5
11UPC09_5	98.9	2.549	4.279	0.039	0.2930	0.0028	0.65938	1689.8	7.7	1656	14	1733.6	7.8	1733.6	7.8	4.5
11UPC09_6	89.3	1.605	1.893	0.016	0.1798	0.0014	0.45975	1079.3	5.7	1065.9	7.8	1092	11	1065.9	7.8	1.2
11UPC09_7	151	1.24	1.884	0.029	0.1829	0.0027	0.57466	1079	11	1083	15	1075	16	1083	15	0.4
11UPC09_8	142.9	1.622	1.844	0.014	0.1768	0.0012	0.50002	1061	4.9	1049.4	6.7	1082.3	9.1	1049.4	6.7	1.1
11UPC09_9	134	1.24	1.853	0.016	0.1771	0.0013	0.47062	1064.2	5.8	1050.8	7.3	1081.5	9.9	1050.8	7.3	1.3
11UPC09_10	442	1.046	1.845	0.010	0.1775	0.0010	0.69297	1061.5	3.4	1053.3	5.6	1078.3	5.4	1053.3	5.6	0.8
11UPC09_11	100.2	1.07	1.785	0.022	0.1719	0.0019	0.64469	1039.3	7.9	1023	11	1093	11	1023	11	1.6
11UPC09_12	207	1.047	1.916	0.015	0.1830	0.0013	0.46801	1086.6	5.2	1084.2	7	1088	10	1084.2	7	0.2
11UPC09_13	52.3	1.249	1.825	0.020	0.1768	0.0015	0.30427	1054.1	7.3	1049.2	8.3	1075	16	1049.2	8.3	0.5
11UPC09_14	198	1.145	1.817	0.026	0.1737	0.0021	0.88416	1050.8	9.5	1032	12	1089	14	1032	12	1.8
11UPC09_15	28.7	1.273	1.948	0.029	0.1822	0.0022	0.21188	1097	10	1079	12	1158	20	1079	12	1.6
11UPC09_16	25.6	0.7274	1.516	0.033	0.1442	0.0026	0.44985	937	13	868	14	1107	20	868	14	7.4
11UPC09_17	189.5	1.754	2.001	0.014	0.1897	0.0015	0.56619	1115.5	4.9	1119.5	8.3	1114.8	7.3	1119.5	8.3	0.4
11UPC09_18	207	3.45	4.756	0.034	0.3195	0.0024	0.73822	1776.9	6	1787	12	1767.3	6.6	1767.3	6.6	1.1
11UPC09_19	457	1.259	5.102	0.048	0.3193	0.0027	0.97324	1835.9	8.1	1781	16	1901.4	6.5	1901.4	6.5	6.3
11UPC09_20	25.7	1.179	1.843	0.032	0.1718	0.0020	0.035819	1060	11	1022	11	1148	25	1022	11	3.6
11UPC09_21	122.5	1.777	1.889	0.017	0.1830	0.0012	0.46462	1077	6.1	1083.2	6.8	1077	11	1083.2	6.8	0.6
11UPC09_22	173	1.626	1.880	0.016	0.1811	0.0014	0.46069	1073.8	5.7	1072.8	7.9	1083.4	8.2	1072.8	7.9	0.1
11UPC09_23	46.4	1.194	1.849	0.030	0.1705	0.0020	0.2524	1063	10	1015	11	1175	15	1015	11	4.5
11UPC09_24	72.9	0.869	1.809	0.023	0.1704	0.0015	0.19038	1048.2	8.4	1014.1	8.5	1117	17	1014.1	8.5	3.3
11UPC09_25	48	1.115	4.070	0.046	0.2852	0.0034	0.68258	1647.5	9.4	1617	17	1685	15	1685	15	4.0
11UPC09_26	97.4	1.289	1.922	0.017	0.1829	0.0017	0.52488	1089.1	6	1082.8	9	1100	10	1082.8	9	0.6
11UPC09_27	22.29	0.779	1.573	0.045	0.1467	0.0037	0.61985	961	17	882	21	1170	28	882	21	8.2
11UPC09_28	221.1	3.14	4.290	0.031	0.2997	0.0025	0.39783	1691.9	6	1690	12	1707	8.7	1707	8.7	1.0
11UPC09_29	180	3.29	4.529	0.047	0.3019	0.0026	0.94385	1735.5	8.7	1700	13	1779.4	6.1	1779.4	6.1	4.5

11UPC09_30	44.7	1.512	1.794	0.026	0.1737	0.0019	0.33659	1042.6	9.6	1032	10	1080	15	1032	10	1.0
11UPC09_31	79.7	0.7015	1.740	0.023	0.1628	0.0015	0.15593	1022.8	8.7	972	8	1157	15	972	8	5.0
11UPC09_32	34.3	1.647	1.868	0.030	0.1812	0.0019	0.19035	1069	11	1073	10	1079	24	1073	10	0.4
11UPC09_33	70.5	0.947	2.006	0.023	0.1908	0.0017	0.45769	1117	7.8	1125.8	9.4	1092	12	1125.8	9.4	0.8
11UPC09_34	277	2.45	4.514	0.040	0.3041	0.0027	0.97005	1733	7.5	1711	13	1766.9	4.9	1766.9	4.9	3.2
11UPC09_35	108	0.597	3.125	0.028	0.2526	0.0020	0.4766	1439.4	6.6	1452	10	1434.3	8.5	1434.3	8.5	1.2
11UPC09_36	75.6	1.261	1.910	0.019	0.1835	0.0017	0.40487	1084.2	6.8	1086.1	9	1091	15	1086.1	9	0.2
11UPC09_37	81.8	0.763	1.901	0.020	0.1823	0.0020	0.32209	1081.1	6.9	1079	11	1092	15	1079	11	0.2
11UPC09_38	41.7	1.472	1.632	0.026	0.1640	0.0019	0.54648	985.7	9.6	979	10	1024	18	979	10	0.7
11UPC09_39	25.4	1.259	1.728	0.030	0.1666	0.0024	0.56833	1018	11	993	13	1080	20	993	13	2.5
11UPC09_40	20.8	1.358	1.897	0.031	0.1871	0.0023	0.35877	1079	11	1106	12	1048	23	1106	12	2.5
11UPC09_41	35.99	1.51	1.771	0.031	0.1660	0.0016	0.00018371	1033	11	990.2	8.9	1123	20	990.2	8.9	4.1
11UPC09_42	79.6	1.674	1.831	0.017	0.1774	0.0014	0.326	1057.1	6.4	1052.7	7.4	1074	13	1052.7	7.4	0.4
11UPC09_43	43.1	1.11	1.881	0.031	0.1788	0.0026	0.92875	1073	11	1060	15	1119	12	1060	15	1.2
11UPC09_44	129.1	1.323	1.923	0.018	0.1843	0.0015	0.51844	1088.6	6.3	1090.2	8.1	1092.8	9.9	1090.2	8.1	0.1
11UPC09_45	140.3	1.339	1.929	0.013	0.1849	0.0013	0.35193	1091	4.6	1093.6	7.3	1093.1	9.4	1093.6	7.3	0.2
11UPC09_46	109.5	0.823	1.981	0.024	0.1884	0.0023	0.65998	1108.5	8.3	1113	13	1117	12	1113	13	0.4
11UPC09_47	216	2.032	1.920	0.016	0.1849	0.0013	0.3305	1087.8	5.5	1093.5	7.2	1089.5	9	1093.5	7.2	0.5
11UPC09_48	64.5	1.423	1.943	0.026	0.1817	0.0021	0.84886	1093	10	1076	11	1142	13	1076	11	1.6
11UPC09_49	11.85	2.006	2.199	0.049	0.1973	0.0044	0.53977	1181	16	1160	24	1221	26	1160	24	1.8
11UPC09_50	168	2.33	4.280	0.033	0.2992	0.0025	0.70552	1689.2	6.4	1687	12	1700.8	6.9	1700.8	6.9	0.8
11UPC09_51	316	1.934	14.450	0.170	0.4960	0.0061	0.90614	2779	11	2596	26	2909.4	6.7	2909.4	6.7	10.8
11UPC09_52	111.7	1.257	1.757	0.019	0.1679	0.0017	0.61204	1029.4	6.9	1000.1	9.1	1098	10	1000.1	9.1	2.8
11UPC09_53	107	1.219	1.776	0.028	0.1686	0.0026	0.7574	1036	10	1004	15	1112	13	1004	15	3.1
11UPC09_54	200.2	1.1409	4.029	0.022	0.2829	0.0017	0.51752	1639.9	4.4	1605.6	8.4	1692.2	5	1692.2	5	5.1
11UPC09_55	36	1.829	1.769	0.034	0.1694	0.0029	0.61322	1032	12	1008	16	1106	17	1008	16	2.3
11UPC09_56	85	1.35	3.945	0.046	0.2848	0.0026	0.78661	1622.1	9.6	1617	13	1645.2	8.9	1645.2	8.9	1.7
11UPC09_57	27.4	1.295	4.337	0.063	0.2980	0.0036	0.22755	1700	12	1681	18	1727	23	1727	23	2.7
11UPC09_58	230.8	5.18	4.377	0.035	0.3041	0.0034	0.93159	1707.7	6.5	1711	17	1708.7	6.4	1708.7	6.4	0.1
11UPC09_59	51.2	1.165	2.012	0.024	0.1911	0.0015	0.27545	1121.2	8.2	1127.1	8.2	1113	14	1127.1	8.2	0.5

11UPC09_60	32.7	0.902	1.945	0.034	0.1849	0.0028	0.72019	1096	12	1094	15	1095	20	1094	15	0.2
11UPC09_61	37.4	1.605	1.941	0.031	0.1855	0.0026	0.36789	1095	11	1097	14	1105	20	1097	14	0.2
11UPC09_62	38	1.696	1.902	0.034	0.1820	0.0021	0.18955	1081	12	1078	12	1106	24	1078	12	0.3
11UPC09_63	40.2	0.97	2.624	0.037	0.2227	0.0024	0.27735	1306	10	1296	12	1336	14	1336	14	3.0
11UPC09_64	118	1.011	2.019	0.028	0.1931	0.0030	0.5593	1121	9.3	1138	16	1103	15	1138	16	1.5
11UPC09_65	105.6	1.659	1.967	0.017	0.1865	0.0013	0.47265	1103.8	5.7	1102.4	6.9	1118	10	1102.4	6.9	0.1
11UPC09_66	191	0.687	0.662	0.009	0.0820	0.0010	0.28943	515.5	5.5	508.1	6	571	21	508.1	6	1.4
11UPC09_67	142	1.31	4.833	0.033	0.3202	0.0023	0.55427	1791.1	5.8	1792	11	1793.9	7.4	1793.9	7.4	0.1
11UPC09_68	219	3.8	4.780	0.028	0.3208	0.0022	0.55955	1781.2	4.9	1793	11	1771.6	7.5	1771.6	7.5	1.2
11UPC09_69	44.6	0.689	1.816	0.026	0.1731	0.0026	0.29585	1051.6	9.9	1029	14	1102	21	1029	14	2.1
11UPC09_70	38.5	2.3	4.414	0.046	0.3066	0.0030	0.30645	1714.3	8.6	1724	15	1705	11	1705	11	1.1
11UPC09_71	93.6	0.587	2.851	0.029	0.2277	0.0022	0.31905	1369.7	7.5	1322	11	1451	11	1451	11	8.9
11UPC09_72	47.9	1.092	1.723	0.022	0.1675	0.0017	0.16873	1017.8	8	998.1	9.7	1059	16	998.1	9.7	1.9
11UPC09_73	46.6	1.859	1.852	0.030	0.1741	0.0020	0.18335	1065	10	1034	11	1122	19	1034	11	2.9
11UPC09_74	47.9	1.086	1.924	0.033	0.1831	0.0019	0.27927	1091	11	1084	10	1092	20	1084	10	0.6
11UPC09_75	145.2	1.197	1.842	0.014	0.1766	0.0011	0.28675	1060.5	5.1	1048.5	6.2	1093.6	9.5	1048.5	6.2	1.1
11UPC09_76	94.1	1.094	2.967	0.036	0.2364	0.0024	0.4882	1398.3	9.2	1368	13	1454	10	1454	10	5.9
11UPC09_77	87	1.374	1.889	0.024	0.1789	0.0017	0.21132	1076.5	8.2	1061.8	9.4	1096	15	1061.8	9.4	1.4
11UPC09_78	65.7	0.922	0.668	0.012	0.0818	0.0015	0.18299	519.1	7.5	507	9	553	33	507	9	2.3
11UPC09_79	109.4	0.9	3.091	0.029	0.2475	0.0019	0.5036	1430.1	7.1	1425	10	1435.2	8.9	1435.2	8.9	0.7
11UPC09_80	31.6	1.135	2.040	0.034	0.1874	0.0025	0.0083475	1128	11	1107	14	1174	26	1107	14	1.9
11UPC09_81	81.3	1.38	2.077	0.030	0.1946	0.0024	0.50537	1141.3	9.9	1148	13	1134	15	1148	13	0.6
11UPC09_82	116.7	1.327	1.985	0.056	0.1832	0.0022	0.40709	1102	13	1086	12	1165	32	1086	12	1.5
11UPC09_83	108.4	1.841	1.920	0.020	0.1792	0.0019	0.66452	1087.5	6.8	1063	11	1136	10	1063	11	2.3
11UPC09_84	86.4	1.426	4.787	0.041	0.3223	0.0031	0.61927	1782.2	7.2	1801	15	1767.4	8	1767.4	8	1.9
11UPC09_85	84.1	0.59	2.972	0.027	0.2373	0.0020	0.50065	1400	7	1372	10	1443	11	1443	11	4.9
11UPC09_86	158	1.162	1.905	0.024	0.1852	0.0021	0.63417	1083.3	8.1	1095	11	1068	12	1095	11	1.1
11UPC09_87	36.7	1.445	1.864	0.028	0.1823	0.0023	0.298	1067.5	9.7	1079	12	1057	16	1079	12	1.1
11UPC09_88	49.9	1.683	1.981	0.026	0.1869	0.0017	0.25303	1109.5	8.5	1104.6	9.5	1127	14	1104.6	9.5	0.4
11UPC09_89	44.5	1.029	1.948	0.027	0.1812	0.0019	0.1628	1097	9.3	1073	10	1134	20	1073	10	2.2

11UPC09_90	78	1.32	4.101	0.045	0.2918	0.0034	0.6276	1655.7	8.6	1652	17	1660	11	1660	11	0.5
11UPC09_91	63.32	1.444	1.713	0.021	0.1692	0.0014	0.421	1012.7	7.8	1007.8	7.8	1021	15	1007.8	7.8	0.5
11UPC09_92	140	0.887	2.463	0.040	0.1996	0.0030	0.86057	1260	12	1173	16	1421.9	8.9	1173	16	6.9
11UPC09_93	154	1.008	2.120	0.019	0.1926	0.0014	0.44621	1155.1	6.1	1135.5	7.7	1190.7	9.6	1135.5	7.7	1.7
11UPC09_94	113.7	1.744	1.846	0.022	0.1731	0.0014	0.35555	1061.5	7.8	1028.9	7.6	1130	13	1028.9	7.6	3.1
11UPC09_95	156.7	1.348	2.216	0.077	0.1779	0.0014	0.11704	1180	24	1055.3	7.9	1408	65	1055.3	7.9	10.6
11UPC09_96	114.7	1.312	2.236	0.020	0.2036	0.0017	0.66177	1192.8	6.1	1194.4	8.9	1199.5	7.8	1194.4	8.9	0.1
11UPC09_97	81.7	1.483	2.916	0.029	0.2410	0.0023	0.52228	1385.5	7.5	1392	12	1392	13	1392	13	0.0
11UPC09_98	101	0.767	1.960	0.017	0.1871	0.0016	0.40437	1101.5	5.8	1105.6	8.6	1092	12	1105.6	8.6	0.4
11UPC09_99	73	0.802	2.160	0.021	0.1952	0.0017	0.48252	1167.9	6.8	1149.4	9.3	1208	12	1149.4	9.3	1.6
11UPC09_100	152	1.007	2.022	0.015	0.1892	0.0014	0.43513	1124	4.8	1117.1	7.4	1140.3	9.6	1117.1	7.4	0.6
11UPC09_101	297	1.877	3.012	0.036	0.2420	0.0032	0.8653	1410	9.2	1397	16	1431	7.9	1431	7.9	2.4
11UPC09_102	71.1	0.716	4.426	0.038	0.2905	0.0022	0.70256	1716.8	7.1	1644	11	1807.3	7.7	1807.3	7.7	9.0
11UPC09_103	124.9	1.193	12.953	0.059	0.5137	0.0038	0.59791	2676.1	4.3	2672	16	2671.7	6	2671.7	6	0.0
11UPC09_104	22.3	1.102	1.814	0.036	0.1771	0.0025	0.27962	1051	13	1052	14	1064	26	1052	14	0.1
11UPC09_105	97.8	1.331	1.973	0.019	0.1858	0.0014	0.39413	1106	6.6	1098.7	7.8	1120	14	1098.7	7.8	0.7
11UPC09_106	210	1.728	1.864	0.019	0.1818	0.0018	0.6981	1070.6	7	1076.5	9.7	1062	9.6	1076.5	9.7	0.6
11UPC09_107	130.6	1.451	1.908	0.016	0.1822	0.0015	0.6909	1083.7	5.7	1079	8.3	1096	10	1079	8.3	0.4
11UPC09_108	128.5	1.345	4.682	0.029	0.3131	0.0017	0.54412	1765.2	5.5	1756.9	8.3	1773.9	6.7	1773.9	6.7	1.0
11UPC09_109	23.49	1.842	1.887	0.041	0.1766	0.0027	0.12923	1075	14	1048	15	1130	27	1048	15	2.5
11UPC09_110	56.2	1.24	1.798	0.036	0.1734	0.0037	0.66032	1043	13	1030	21	1083	21	1030	21	1.2
11UPC09_112	485	7.64	4.458	0.074	0.3018	0.0060	0.90886	1722	14	1699	29	1752.5	8.4	1752.5	8.4	3.1
11UPC09_113	136	2.29	4.305	0.043	0.2924	0.0025	0.60499	1694.9	8	1653	12	1741.2	8.9	1741.2	8.9	5.1
11UPC09_114	310	1.655	2.839	0.036	0.2294	0.0033	0.8024	1366.3	9.4	1331	18	1422	11	1422	11	6.4
11UPC09_115	33.5	2.728	4.043	0.065	0.2745	0.0038	0.77058	1643	13	1563	19	1741	12	1741	12	10.2
11UPC09_116	42.2	1.038	1.620	0.058	0.1530	0.0058	0.80966	978	23	917	32	1139	19	917	32	6.2
11UPC09_117	623	5.42	3.886	0.078	0.2546	0.0055	0.93809	1611	16	1461	28	1795	10	1795	10	18.6
11UPC09_118	161.1	2.367	1.837	0.017	0.1744	0.0016	0.50541	1058.4	6.2	1036.2	8.6	1101	11	1036.2	8.6	2.1
11UPC09_119	111	1.192	2.007	0.016	0.1881	0.0012	0.11658	1117.6	5.4	1111.3	6.6	1137	12	1111.3	6.6	0.6
11UPC09_120	312	5.27	3.185	0.030	0.2215	0.0021	0.81273	1453.1	7.2	1290	11	1703	6.3	1703	6.3	24.3

11UPC09_121	35.4	0.881	4.061	0.045	0.2875	0.0030	0.42098	1645.7	9.1	1629	15	1669	11	1669	11	2.4
11UPC09_122	215	3.58	1.957	0.014	0.1866	0.0011	0.36951	1101.3	4.8	1103	5.8	1090	7.2	1103	5.8	0.2
11UPC10_1	131	0.682	2.231	0.016	0.2046	0.0013	0.48958	1190.7	4.9	1200	7	1167.2	9.7	1167.2	7	0.8
11UPC10_2	125.9	1.158	4.073	0.033	0.2891	0.0022	0.71031	1649.5	6.6	1637	11	1657.9	6.3	1657.9	6.3	1.3
11UPC10_3	83.4	0.91	12.890	0.140	0.5094	0.0069	0.75638	2671	10	2653	29	2695.7	8	2695.7	8	1.6
11UPC10_4	216.2	3.076	3.192	0.030	0.2558	0.0020	0.86163	1454.9	7.2	1468	10	1437	8.5	1437	8.5	2.2
11UPC10_5	141.6	1.05	4.650	0.025	0.3148	0.0019	0.64536	1758.7	4.6	1764	9.3	1748.4	6	1748.4	6	0.9
11UPC10_6	67.1	0.701	5.202	0.032	0.3337	0.0023	0.39407	1852.7	5.2	1856	11	1846.2	6.1	1846.2	6.1	0.5
11UPC10_7	85.7	1.281	2.105	0.025	0.1980	0.0018	0.51282	1149.9	8.1	1164.4	9.8	1125	13	1164.4	9.8	1.3
11UPC10_8	77	2.536	5.129	0.041	0.3281	0.0022	0.46446	1841.5	6.7	1829	11	1852.8	8.3	1852.8	8.3	1.3
11UPC10_9	103	1.874	3.194	0.023	0.2546	0.0019	0.52445	1455.4	5.7	1462.1	9.7	1435.3	7.3	1435.3	7.3	1.9
11UPC10_10	198	2.15	2.241	0.024	0.2038	0.0014	0.73832	1193.6	7.4	1195.8	7.7	1192.6	9.5	1195.8	7.7	0.2
11UPC10_11	349	1.351	1.682	0.027	0.1388	0.0023	0.87543	1001	10	838	13	1399.5	5.7	838	13	16.3
11UPC10_12	69	1.138	1.835	0.021	0.1787	0.0017	0.54979	1057.5	7.7	1059.7	9.2	1064	11	1059.7	9.2	0.2
11UPC10_13	166.6	1.0628	3.010	0.021	0.2403	0.0017	0.60775	1409.9	5.3	1388.3	8.8	1442.3	7.7	1442.3	7.7	3.7
11UPC10_14	401	1.838	3.386	0.044	0.2275	0.0031	0.83607	1502.9	9.7	1321	16	1756.7	6.8	1756.7	6.8	24.8
11UPC10_15	68.1	0.871	5.343	0.041	0.3408	0.0028	0.52725	1875.4	6.5	1890	13	1854	8.2	1854	8.2	1.9
11UPC10_16	138	1.257	3.111	0.027	0.2483	0.0021	0.42736	1434.9	6.6	1430	11	1448	11	1448	11	1.2
11UPC10_17	120	1.098	3.229	0.025	0.2562	0.0018	0.46767	1463.7	5.9	1470.4	9.2	1454	10	1454	10	1.1
11UPC10_18	10.31	2.595	2.606	0.084	0.2052	0.0058	0.53754	1303	24	1202	31	1506	38	1506	38	20.2
11UPC10_19	158	2.052	1.749	0.018	0.1716	0.0017	0.72023	1026.6	6.7	1020.9	9.5	1046	10	1020.9	9.5	0.6
11UPC10_20	29.1	0.932	4.734	0.048	0.3142	0.0027	0.34053	1772.5	8.6	1761	13	1794	11	1794	11	1.8
11UPC10_21	256	3.16	1.685	0.013	0.1686	0.0014	0.57379	1002.6	5.1	1004.1	7.5	1007.6	6.3	1004.1	7.5	0.1
11UPC10_22	83	1.45	2.212	0.025	0.2036	0.0020	0.72705	1184.3	8	1195	11	1173	10	1195	11	0.9
11UPC10_23	162	1.798	2.066	0.021	0.1942	0.0017	0.6321	1137.2	6.9	1145.5	9.1	1129	10	1145.5	9.1	0.7
11UPC10_24	126	3.3	0.850	0.012	0.1008	0.0016	0.63722	624.4	6.7	618.8	9.6	643	16	618.8	9.6	0.9
11UPC10_25	80.3	0.89	2.414	0.026	0.2147	0.0023	0.67072	1246.1	7.7	1254	12	1238.8	8.3	1238.8	8.3	1.2
11UPC10_26	315	3.28	1.695	0.014	0.1669	0.0013	0.6936	1006.3	5.4	995.2	7.4	1043.7	5.9	995.2	7.4	1.1

11UPC10_27	54.64	1.33	2.865	0.027	0.2383	0.0018	0.14367	1372.3	7	1377.9	9.6	1376	11	1376	11	0.1
11UPC10_28	76.16	0.97	4.687	0.038	0.3159	0.0022	0.54707	1768.9	6.8	1770	11	1770.7	9.5	1770.7	9.5	0.0
11UPC10_29	88.7	1.322	2.300	0.024	0.2121	0.0016	0.46598	1211.7	7.3	1239.9	8.5	1162.3	9.8	1162.3	8.5	2.3
11UPC10_30	232	1.118	0.586	0.007	0.0745	0.0008	0.67744	467.8	4.4	463.3	5.1	501	13	463.3	5.1	1.0
11UPC10_31	69	2.235	3.017	0.030	0.2398	0.0024	0.6349	1411.3	7.5	1388	13	1445.3	9.1	1445.3	9.1	4.0
11UPC10_32	390	1.477	1.784	0.023	0.1446	0.0021	0.85513	1039.3	8.3	870	12	1424.2	9.9	870	12	16.3
11UPC10_33	153	2.25	2.915	0.042	0.2337	0.0025	0.76273	1385	11	1354	13	1432	16	1432	16	5.4
11UPC10_34	990	2.711	0.887	0.025	0.0691	0.0023	0.97585	644	14	431	14	1495	12	DISC	DISC	33.1
11UPC10_35	138	0.871	1.996	0.015	0.1924	0.0014	0.55964	1113.9	5.1	1134.5	7.3	1074	8.1	1134.5	7.3	1.8
11UPC10_36	23.38	0.7623	12.310	0.100	0.4960	0.0048	0.60041	2628.7	7.6	2596	21	2661.8	8.1	2661.8	8.1	2.5
11UPC10_37	105	0.803	1.986	0.021	0.1892	0.0020	0.51426	1111	6.9	1117	11	1098	10	1117	11	0.5
11UPC10_39	88	0.466	4.880	0.280	0.3020	0.0043	0.96042	1772	24	1700	21	1859	36	1859	36	8.6
11UPC10_40	128	1.034	1.752	0.013	0.1694	0.0014	0.44364	1027.8	4.9	1009	7.5	1069.2	9.4	1009	7.5	1.8
11UPC10_41	146.6	1.81	3.127	0.048	0.2471	0.0027	0.89308	1438	12	1423	14	1472	11	1472	11	3.3
11UPC10_42	136.5	0.632	1.815	0.017	0.1771	0.0014	0.48077	1050.6	6.1	1051.2	7.8	1056.5	9.8	1051.2	7.8	0.1
11UPC10_43	62.8	1.502	3.130	0.035	0.2526	0.0020	0.40477	1439.7	8.6	1452	10	1424	11	1424	11	2.0
11UPC10_44	75.1	0.974	0.883	0.012	0.1040	0.0011	0.13011	642.3	6.6	638	6.5	662	23	638	6.5	0.7
11UPC10_45	104.6	0.817	2.143	0.020	0.1972	0.0017	0.61084	1162.3	6.4	1160.4	9	1172.7	9.2	1160.4	9	0.2
11UPC10_46	210.8	4.36	5.534	0.057	0.3348	0.0034	0.7749	1907.2	8.8	1861	16	1949.7	7.2	1949.7	7.2	4.5
11UPC10_47	61.7	0.3908	5.420	0.047	0.3361	0.0026	0.61819	1888.5	7.6	1867	13	1914.3	7.9	1914.3	7.9	2.5
11UPC10_48	62.7	0.2257	5.509	0.040	0.3398	0.0022	0.66075	1901.5	6.2	1886	10	1928.8	6.4	1928.8	6.4	2.2
11UPC10_49	34	0.52	5.158	0.055	0.3179	0.0040	0.65076	1845	9.1	1779	20	1930	11	1930	11	7.8
11UPC10_50	152	1.158	2.205	0.017	0.2003	0.0018	0.46783	1183.2	5.5	1176.8	9.5	1207	11	1176.8	9.5	0.5
11UPC10_51	147	1.143	2.504	0.034	0.1968	0.0024	0.683	1272.8	9.8	1158	13	1491	13	1158	13	9.0
11UPC10_52	82.3	1.094	13.043	0.088	0.5186	0.0040	0.6448	2684	6.3	2693	17	2675.1	6.5	2675.1	6.5	0.7
11UPC10_53	241.5	10.9	1.730	0.027	0.1714	0.0021	0.88335	1018.9	9.7	1020	12	1031	12	1020	12	0.1
11UPC10_54	181	3.87	3.948	0.033	0.2883	0.0028	0.90575	1623.2	6.7	1633	14	1612	6.6	1612	6.6	1.3
11UPC10_55	86.3	0.88	2.633	0.057	0.2120	0.0027	0.30316	1303	10	1239	14	1424	31	1424	31	13.0
11UPC10_56	37.89	0.997	2.080	0.050	0.1846	0.0014	0.3087	1136	13	1091.9	7.8	1227	33	1091.9	7.8	3.9
11UPC10_57	64.1	1.625	12.610	0.120	0.5050	0.0047	0.71662	2650.5	8.7	2635	20	2663.2	7.1	2663.2	7.1	1.1

11UPC10_59	120	1.967	3.158	0.024	0.2540	0.0020	0.42715	1446.5	5.9	1459	10	1433.6	9.3	1433.6	9.3	1.8
11UPC10_60	317	2.55	0.511	0.006	0.0653	0.0007	0.46485	418.7	4.2	407.6	4	481	17	407.6	4	2.7
11UPC10_61	45.7	2.178	3.037	0.031	0.2429	0.0021	0.27621	1416.3	7.9	1402	11	1435	13	1435	13	2.3
11UPC10_62	85.5	1.126	4.833	0.037	0.3105	0.0025	0.74845	1790.3	6.4	1743	12	1845.6	5.9	1845.6	5.9	5.6
11UPC10_63	232	1.874	1.759	0.012	0.1748	0.0013	0.28315	1030.5	4.3	1038.7	7	1012.2	9.5	1038.7	7	0.8
11UPC10_64	131.6	0.726	4.592	0.041	0.2954	0.0031	0.7301	1747.5	7.4	1668	16	1855.1	7.4	1855.1	7.4	10.1
11UPC10_65	102.2	0.819	1.940	0.018	0.1855	0.0020	0.58146	1095.5	6.2	1097	11	1101	10	1097	11	0.1
11UPC10_66	111.2	2.381	2.386	0.020	0.2125	0.0016	0.58295	1239	6.3	1241.8	8.5	1232.2	9.9	1232.2	9.9	0.8
11UPC10_67	44.3	1.391	4.803	0.041	0.3000	0.0028	0.60916	1784.9	7.1	1691	14	1889.3	8.2	1889.3	8.2	10.5
11UPC10_68	237.4	0.911	4.969	0.046	0.3259	0.0032	0.70343	1813.8	7.8	1818	15	1813.9	7.2	1813.9	7.2	0.2
11UPC10_69	143	0.5111	2.863	0.028	0.2365	0.0021	0.64113	1371.9	7.2	1368	11	1365.3	7.7	1365.3	7.7	0.2
11UPC10_70	132	1.238	5.341	0.031	0.3440	0.0026	0.43545	1875.4	4.9	1908	13	1837	7.6	1837	7.6	3.9
11UPC10_71	119	0.4541	13.736	0.079	0.5410	0.0043	0.56157	2731.4	5.5	2787	18	2695.5	6.9	2695.5	6.9	3.4
11UPC10_72	325.5	1.61	1.876	0.036	0.1786	0.0034	0.86945	1072	13	1059	19	1108	14	1059	19	1.2
11UPC10_73	56.8	1.072	3.246	0.039	0.2549	0.0025	0.34674	1467.5	9.4	1464	13	1466	14	1466	14	0.1
11UPC10_74	97.1	1.802	4.861	0.030	0.3213	0.0025	0.36744	1796.6	5.2	1796	12	1798.1	9.3	1798.1	9.3	0.1
11UPC10_75	135.4	1.358	2.009	0.021	0.1883	0.0019	0.73278	1118.1	7.3	1112	10	1129.8	9.2	1112	10	0.5
11UPC10_76	58.3	2.131	1.586	0.022	0.1598	0.0019	0.31659	966.3	9.2	956	10	978	17	956	10	1.1
11UPC10_77	93	1.085	2.810	0.045	0.1983	0.0037	0.83121	1362	12	1166	20	1679	11	1166	20	14.4
11UPC10_78	198.7	1.842	4.387	0.023	0.3054	0.0019	0.60982	1709.6	4.3	1718	9.2	1697.7	5.6	1697.7	5.6	1.2
11UPC10_79	129	0.86	5.322	0.041	0.3352	0.0029	0.58529	1871.9	6.6	1863	14	1885.8	6.8	1885.8	6.8	1.2
11UPC10_80	110.2	1.458	5.717	0.041	0.3544	0.0022	0.59449	1934.2	6.2	1955	11	1908.1	5	1908.1	5	2.5
11UPC10_81	156.7	0.99	1.961	0.028	0.1721	0.0031	0.31525	1102.5	9.7	1027	17	1222	43	1027	17	6.8
11UPC10_83	63.4	1.564	1.937	0.019	0.1844	0.0015	0.39245	1093.7	6.6	1090.6	8.3	1095	15	1090.6	8.3	0.3
11UPC10_84	113.7	0.844	3.154	0.029	0.2532	0.0025	0.65074	1445.5	7	1455	13	1431.8	9.6	1431.8	9.6	1.6
11UPC10_85	215	1.236	5.193	0.045	0.3229	0.0034	0.74976	1851	7.3	1806	16	1900.4	7.1	1900.4	7.1	5.0
11UPC10_86	109.4	0.691	6.737	0.048	0.3787	0.0035	0.60312	2077.1	6.3	2070	16	2085.4	8.2	2085.4	8.2	0.7
11UPC10_87	58.1	1.113	5.705	0.039	0.3479	0.0026	0.54341	1931.7	5.9	1925	13	1940.4	7.6	1940.4	7.6	0.8
11UPC10_88	70.2	1.982	4.218	0.043	0.2809	0.0029	0.80532	1676.8	8.4	1596	15	1794.6	9	1794.6	9	11.1
11UPC10_89	154.2	1.039	2.407	0.035	0.1958	0.0028	0.83899	1244	10	1152	15	1400.5	8.1	1152	15	7.4

11UPC10_90	29.12	0.4693	3.438	0.040	0.2676	0.0031	0.038917	1512.4	9.1	1528	16	1484	15	1484	15	3.0
11UPC10_91	136	2.489	4.316	0.048	0.3020	0.0032	0.63319	1695.7	9	1701	16	1702	11	1702	11	0.1
11UPC10_92	24.3	1.334	4.828	0.087	0.2897	0.0055	0.58905	1789	15	1640	27	1945	14	1945	14	15.7
11UPC10_93	129.7	1.52	3.082	0.044	0.2451	0.0037	0.8112	1427	11	1413	19	1451	11	1451	11	2.6
11UPC10_94	520	5.87	0.555	0.021	0.0704	0.0025	0.94865	446	14	438	15	492	13	438	15	1.8
11UPC10_95	131.9	0.4966	2.967	0.022	0.2372	0.0016	0.5071	1399	5.5	1371.9	8.6	1448	6.8	1448	6.8	5.3
11UPC10_96	121.4	0.91	1.955	0.020	0.1897	0.0019	0.616	1100.6	7	1120	10	1050	12	1120	10	1.8
11UPC10_97	61.4	3.355	4.545	0.063	0.2941	0.0046	0.76805	1741	12	1661	23	1824	15	1824	15	8.9
11UPC10_98	64.5	1.738	5.051	0.036	0.3248	0.0023	0.43197	1827.5	6	1813	11	1838.9	7.8	1838.9	7.8	1.4
11UPC10_99	29.9	0.6701	5.432	0.054	0.3392	0.0027	0.48501	1889.2	8.6	1883	13	1895.3	8.6	1895.3	8.6	0.6
11UPC10_100	43.9	0.3609	12.770	0.140	0.4792	0.0048	0.63379	2662	10	2523	21	2767	11	2767	11	8.8
11UPC10_101	41.9	1.732	1.620	0.025	0.1606	0.0019	0.68671	977.1	9.8	960	10	1033	13	960	10	1.8
11UPC10_102	81	1.221	4.266	0.044	0.2783	0.0032	0.71879	1686.1	8.6	1583	16	1824.6	8	1824.6	8	13.2
11UPC10_103	30.11	1.393	7.370	0.100	0.4031	0.0046	0.44726	2156	13	2183	21	2143	13	2143	13	1.9
11UPC10_104	96	1.059	5.042	0.029	0.3266	0.0021	0.44283	1826.2	4.8	1822	10	1828.2	6.3	1828.2	6.3	0.3
11UPC10_105	75.2	1.594	3.188	0.027	0.2555	0.0018	0.52046	1453.9	6.5	1466.4	9.4	1431.2	8.8	1431.2	8.8	2.5
11UPC10_106	17.92	0.488	5.890	0.078	0.3377	0.0048	0.22269	1962	12	1875	23	2060	18	2060	18	9.0
11UPC10_107	170.9	1.058	3.243	0.029	0.2436	0.0021	0.81602	1467.1	7	1405	11	1551.4	7	1551.4	7	9.4
11UPC10_108	90	2.444	1.788	0.020	0.1750	0.0017	0.45379	1041.7	7	1039.6	9.5	1035	13	1039.6	9.5	0.2
11UPC10_109	82.1	1.421	1.738	0.023	0.1693	0.0018	0.5228	1022.1	8.5	1008	10	1055	16	1008	10	1.4
11UPC10_110	108	1.54	2.142	0.038	0.2017	0.0035	0.81063	1162	12	1184	19	1118	12	1184	19	1.9
11UPC10_111	176	1.355	2.465	0.021	0.2001	0.0015	0.62653	1261.4	6.2	1176	8	1407.1	8.1	1176	8	6.8
11UPC10_112	271	1.092	3.656	0.054	0.2483	0.0039	0.887	1561	12	1429	20	1740.7	7.5	1740.7	7.5	17.9
11UPC10_114	100.4	0.451	5.059	0.042	0.3269	0.0026	0.58756	1828.8	7	1823	13	1830.8	7	1830.8	7	0.4
11UPC10_115	56.4	0.823	5.000	0.042	0.3238	0.0027	0.41651	1818.9	7.2	1808	13	1832.1	9.6	1832.1	9.6	1.3
11UPC10_116	38.8	1.152	4.284	0.064	0.2755	0.0036	0.77844	1689	12	1568	18	1839.8	9.6	1839.8	9.6	14.8
11UPC10_117	122	1.245	5.200	0.037	0.3263	0.0028	0.6772	1852.3	6	1820	14	1884.3	7.5	1884.3	7.5	3.4
11UPC10_118	179	0.975	2.814	0.022	0.2341	0.0016	0.6366	1359	5.8	1355.8	8.3	1365.7	6.3	1365.7	6.3	0.7
11UPC10_119	59.2	0.844	2.692	0.034	0.2197	0.0027	0.65966	1325.4	9.3	1280	14	1400	10	1400	10	8.6
11UPC10_120	34.2	1.045	4.350	0.240	0.2814	0.0045	0.68695	1695	40	1598	22	1827	70	1827	70	12.5

11UPC10_121	67.8	0.569	1.567	0.019	0.1643	0.0019	0.68199	956.6	7.7	981	10	922	11	981	10	2.6
11UPC11_1	113.7	1.954	4.234	0.071	0.2935	0.0056	0.83522	1679	14	1658	28	1706	13	1706	13	2.8
11UPC11_2	102.1	1.796	4.294	0.056	0.2935	0.0052	0.61903	1691	11	1661	25	1729	16	1729	16	3.9
11UPC11_3	43.5	0.619	6.530	0.095	0.3703	0.0066	0.52079	2049	13	2030	31	2079	20	2079	20	2.4
11UPC11_4	66.9	1.431	1.771	0.031	0.1732	0.0029	0.46844	1034	11	1029	16	1040	22	1029	16	0.5
11UPC11_5	205	0.936	3.180	0.028	0.2502	0.0030	0.60634	1451.8	6.7	1441	15	1463	10	1463	10	1.5
11UPC11_6	163	35.7	1.941	0.036	0.1802	0.0027	0.58873	1096	12	1068	15	1132	19	1068	15	2.6
11UPC11_7	64.4	0.863	2.742	0.049	0.2251	0.0049	0.7704	1340	14	1312	25	1394	15	1394	15	5.9
11UPC11_8	132.7	0.653	4.906	0.065	0.3126	0.0058	0.77697	1802	11	1752	29	1858	15	1858	15	5.7
11UPC11_9	19.48	0.4633	6.200	0.120	0.3566	0.0072	0.80618	2002	17	1965	34	2048	17	2048	17	4.1
11UPC11_10	71.1	1.02	2.876	0.044	0.2350	0.0042	0.48426	1375	12	1360	22	1409	17	1409	17	3.5
11UPC11_11	106	1.213	1.713	0.028	0.1679	0.0029	0.68012	1012	11	1000	16	1039	15	1000	16	1.2
11UPC11_12	123	0.888	4.946	0.056	0.3187	0.0053	0.53022	1809.3	9.6	1782	26	1847	14	1847	14	3.5
11UPC11_13	154	2.34	2.835	0.032	0.2300	0.0026	0.49306	1364.1	8.5	1334	14	1402	16	1402	16	4.9
11UPC11_14	41.5	0.932	1.660	0.028	0.1641	0.0028	0.41591	995	11	979	15	1030	18	979	15	1.6
11UPC11_15	214.1	1.844	16.340	0.330	0.5210	0.0110	0.91356	2893	20	2698	48	3050	13	3050	13	11.5
11UPC11_16	91	1.065	1.780	0.027	0.1724	0.0030	0.63059	1037.2	9.7	1025	16	1060	18	1025	16	1.2
11UPC11_17	262	1.225	0.564	0.009	0.0708	0.0013	0.40423	453.6	5.6	440.7	8	498	29	440.7	8	2.8
11UPC11_18	28.7	1.701	2.231	0.045	0.1979	0.0037	0.44993	1189	14	1163	20	1254	23	1163	20	2.2
11UPC11_19	40.9	0.594	2.739	0.040	0.2277	0.0040	0.45535	1338	11	1322	21	1374	17	1374	17	3.8
11UPC11_20	33.7	0.901	1.806	0.035	0.1739	0.0032	0.35996	1050	12	1033	17	1088	26	1033	17	1.6
11UPC11_21	182.7	1.119	3.162	0.036	0.2530	0.0037	0.58187	1448.3	8.7	1454	19	1448	16	1448	16	0.4
11UPC11_22	406	2.97	0.901	0.078	0.0899	0.0043	0.89782	646	40	554	25	952	92	554	25	14.2
11UPC11_22	198	2.858	2.550	0.120	0.2065	0.0055	0.76408	1284	35	1217	33	1388	60	1388	60	12.3
11UPC11_23	52.5	1.269	4.035	0.064	0.2873	0.0050	0.60997	1641	13	1631	26	1673	23	1673	23	2.5
11UPC11_24	447	2.86	2.596	0.063	0.2183	0.0064	0.88682	1300	17	1272	34	1344	18	1344	18	5.4
11UPC11_25	99.6	0.979	1.675	0.025	0.1674	0.0026	0.70135	998.4	9.4	998	14	991	16	998	14	0.0
11UPC11_27	105.8	1.617	1.730	0.026	0.1723	0.0027	0.51169	1019	9.4	1027	15	1014	17	1027	15	0.8

11UPC11_28	60	1.165	5.422	0.082	0.3227	0.0046	0.66403	1887	13	1802	23	1980	13	1980	13	9.0
11UPC11_29	65.3	2.417	4.292	0.063	0.2851	0.0039	0.64662	1690	12	1616	19	1796	10	1796	10	10.0
11UPC11_30	123	1.33	1.995	0.038	0.1822	0.0033	0.71753	1114	13	1078	18	1176	17	1078	18	3.2
11UPC11_31	150.2	1.538	2.951	0.039	0.2355	0.0030	0.68502	1395.5	9.9	1363	16	1435	11	1435	11	5.0
11UPC11_32	148	0.72	2.926	0.038	0.2325	0.0036	0.64084	1389.1	9.9	1347	19	1426	14	1426	14	5.5
11UPC11_33	129.7	2.207	3.233	0.056	0.2520	0.0052	0.60593	1464	14	1448	27	1475	18	1475	18	1.8
11UPC11_34	400	2.205	2.076	0.023	0.1918	0.0026	0.66893	1141.3	7.4	1131	14	1149	13	1131	14	0.9
11UPC11_35	44.6	0.992	1.818	0.031	0.1748	0.0026	0.2866	1051	11	1038	14	1064	22	1038	14	1.2
11UPC11_36	59.6	0.914	1.938	0.032	0.1817	0.0031	0.39663	1095	11	1076	17	1128	21	1076	17	1.7
11UPC11_37	118.8	0.837	4.154	0.069	0.2906	0.0058	0.69692	1663	14	1647	28	1706	18	1706	18	3.5
11UPC11_38	106.9	1.328	6.122	0.090	0.3483	0.0072	0.65571	1992	13	1925	34	2065	20	2065	20	6.8
11UPC11_39	291	0.774	0.566	0.010	0.0681	0.0014	0.41462	455.3	6.7	424.7	8.6	635	48	424.7	8.6	6.7
11UPC11_40	117.2	1.278	2.262	0.038	0.1891	0.0040	0.77262	1203	12	1116	22	1354	18	1116	22	7.2
11UPC11_41	45.3	1.145	1.423	0.027	0.1481	0.0024	0.40307	898	11	890	14	916	22	890	14	0.9
11UPC11_42	34.5	0.679	2.527	0.041	0.2147	0.0030	0.43759	1279	12	1254	16	1341	23	1341	23	6.5
11UPC11_43	84	1.313	12.590	0.170	0.5004	0.0080	0.63547	2648	13	2614	34	2669	14	2669	14	2.1
11UPC11_44	73.9	0.6032	11.940	0.160	0.4666	0.0063	0.72856	2600	12	2467	28	2698.1	9.8	2698.1	9.8	8.6
11UPC11_45	127.1	2.31	1.997	0.028	0.1857	0.0028	0.45819	1113.6	9.6	1098	15	1157	15	1098	15	1.4
11UPC11_46	68.6	0.673	6.269	0.088	0.3479	0.0056	0.66043	2014	12	1923	27	2105	14	2105	14	8.6
11UPC11_47	200	1.971	1.821	0.027	0.1766	0.0036	0.77122	1053.4	9.4	1048	20	1066	14	1048	20	0.5
11UPC11_49	206.8	3.93	1.548	0.022	0.1531	0.0022	0.57968	948.8	8.6	918	12	1008	14	918	12	3.2
11UPC11_50	64.2	1.346	4.910	0.071	0.3207	0.0059	0.58858	1803	12	1792	29	1817	16	1817	16	1.4
11UPC11_51	46.6	1.77	4.350	0.052	0.3020	0.0040	0.4528	1702	9.8	1701	20	1698	15	1698	15	0.2
11UPC11_52	146	0.964	3.109	0.058	0.2435	0.0055	0.94059	1433	15	1404	29	1483	24	1483	24	5.3
11UPC11_53	58	2.11	1.836	0.038	0.1767	0.0030	0.68891	1057	13	1048	16	1085	15	1048	16	0.9
11UPC11_54	223	1.223	0.534	0.007	0.0679	0.0011	0.38243	434.4	4.6	423.3	6.4	494	21	423.3	6.4	2.6
11UPC11_55	72.7	1.608	2.380	0.029	0.2049	0.0028	0.39371	1238.1	8.4	1201	15	1284	16	1284	16	6.5
11UPC11_56	150	1.1	1.997	0.040	0.1845	0.0036	0.74926	1113	14	1091	19	1154	16	1091	19	2.0
11UPC11_57	71.4	0.866	5.045	0.075	0.3074	0.0044	0.68729	1827	13	1727	22	1926.3	9.5	1926.3	9.5	10.3
11UPC11_58	85.3	0.903	1.860	0.027	0.1789	0.0031	0.63961	1066.1	9.7	1061	17	1087	16	1061	17	0.5

11UPC11_59	226.5	1.595	2.933	0.048	0.1964	0.0037	0.75977	1389	13	1156	20	1761	12	1156	20	16.8
11UPC11_60	110.8	1.587	4.897	0.051	0.3155	0.0045	0.59137	1801	8.8	1767	22	1838	13	1838	13	3.9
11UPC11_61	63.7	0.95	3.720	0.100	0.2730	0.0066	0.83749	1570	23	1554	33	1572	31	1572	31	1.1
11UPC11_62	58	1.378	2.941	0.049	0.2369	0.0037	0.60716	1393	13	1370	19	1436	18	1436	18	4.6
11UPC11_63	60.2	0.941	6.839	0.096	0.3763	0.0063	0.52811	2091	13	2058	29	2095	19	2095	19	1.8
11UPC11_64	85.4	1.85	2.179	0.040	0.1996	0.0041	0.7921	1173	13	1176	22	1173	15	1176	22	0.3
11UPC11_66	97.4	1.222	2.880	0.034	0.2381	0.0038	0.6205	1375.9	8.9	1376	20	1379	17	1379	17	0.2
11UPC11_67	256.8	2.233	1.759	0.026	0.1723	0.0028	0.65769	1029.6	9.7	1024	15	1029	14	1024	15	0.5
11UPC11_68	77.4	0.994	4.143	0.056	0.2902	0.0039	0.65621	1666	10	1642	20	1691	11	1691	11	2.9
11UPC11_69	105.3	1.966	4.132	0.057	0.2898	0.0048	0.6248	1662	11	1646	24	1681	15	1681	15	2.1
11UPC11_70	86.3	2.343	4.738	0.055	0.3130	0.0046	0.54332	1773.2	9.7	1755	23	1777	16	1777	16	1.2
11UPC11_71	10.12	2.363	2.011	0.062	0.1878	0.0048	0.56573	1118	21	1112	25	1162	30	1112	25	0.5
11UPC11_72	496	5.22	0.598	0.027	0.0741	0.0018	0.7581	475	16	461	11	484	40	461	11	2.9
11UPC11_73	160.3	1.223	3.937	0.075	0.2664	0.0068	0.69951	1622	16	1521	35	1761	24	1761	24	13.6
11UPC11_74	488.6	1.564	0.573	0.007	0.0694	0.0011	0.62326	459.7	4.5	432.2	6.9	614	18	432.2	6.9	6.0
11UPC11_75	246	2.05	2.138	0.040	0.1893	0.0035	0.64095	1160	13	1117	19	1227	20	1117	19	3.7
11UPC11_76	378	2.33	1.642	0.020	0.1614	0.0024	0.58258	987	7.5	964	13	1026	17	964	13	2.3
11UPC11_77	62.6	0.785	2.755	0.038	0.2277	0.0034	0.61061	1343	10	1322	18	1373	15	1373	15	3.7
11UPC11_78	187	2.343	2.176	0.039	0.2008	0.0037	0.82755	1175	13	1179	20	1176	17	1179	20	0.3
11UPC11_80	96.9	1.525	2.747	0.070	0.2117	0.0053	0.83934	1340	19	1237	28	1493	17	1493	17	17.1
11UPC11_81	28.5	0.543	8.640	0.120	0.4264	0.0075	0.61439	2302	12	2288	34	2319	11	2319	11	1.3
11UPC11_82	96	0.557	5.007	0.094	0.3237	0.0069	0.90985	1818	16	1812	35	1830	15	1830	15	1.0
11UPC11_83	101	1.012	4.966	0.064	0.3232	0.0045	0.54435	1815	11	1805	22	1831	13	1831	13	1.4
11UPC11_84	60	0.819	5.006	0.072	0.3176	0.0055	0.6363	1822	12	1780	27	1866	15	1866	15	4.6
11UPC11_85	107	1.447	3.207	0.040	0.2559	0.0037	0.43103	1457.9	9.7	1469	19	1446	22	1446	22	1.6
11UPC11_86	250.1	1.581	3.527	0.043	0.2659	0.0038	0.61196	1533.8	9.4	1519	19	1541	16	1541	16	1.4
11UPC11_87	96	1.546	5.009	0.064	0.3265	0.0041	0.59889	1821	11	1824	19	1831	15	1831	15	0.4
11UPC11_88	45.9	1.277	8.810	0.180	0.3475	0.0093	0.64947	2321	20	1921	45	2733	20	2733	20	29.7
11UPC11_89	624	0.722	1.190	0.026	0.0977	0.0032	0.89757	796	13	600	19	1404	26	600	19	24.6
11UPC11_90	75.3	1.227	4.805	0.062	0.3069	0.0050	0.64022	1786	11	1725	24	1848	13	1848	13	6.7

11UPC11_91	355	3.025	2.053	0.026	0.1879	0.0033	0.61194	1132.8	8.6	1109	18	1166	18	1109	18	2.1
11UPC11_93	107.1	0.87	5.001	0.066	0.3261	0.0052	0.57846	1820	11	1819	25	1835	15	1835	15	0.9
11UPC11_94	137.9	2.289	1.733	0.023	0.1688	0.0025	0.62132	1020.2	8.6	1005	14	1063	13	1005	14	1.5
11UPC11_95	19.65	1.113	0.767	0.024	0.0919	0.0024	0.6244	577	14	567	14	666	51	567	14	1.7
11UPC11_96	23.8	1.022	3.130	0.066	0.2476	0.0048	0.50326	1438	16	1425	25	1481	22	1481	22	3.8
11UPC11_97	144.1	1.37	5.575	0.074	0.3430	0.0054	0.79292	1912	11	1904	26	1924	11	1924	11	1.0
11UPC11_98	63.6	1.54	12.760	0.460	0.5060	0.0130	0.88699	2656	35	2634	55	2678	24	2678	24	1.6
11UPC11_99	304	2.42	2.185	0.026	0.1914	0.0026	0.45653	1175.7	8.3	1128	14	1270	16	1128	14	4.1
11UPC11_100	97.1	2.123	3.077	0.041	0.2446	0.0041	0.56997	1429	10	1410	21	1446	15	1446	15	2.5
11UPC11_101	33.8	0.642	1.679	0.035	0.1689	0.0029	0.15023	1001	13	1005	16	1006	25	1005	16	0.4
11UPC11_102	77	2.022	1.846	0.024	0.1770	0.0026	0.48443	1061.5	8.4	1050	14	1076	18	1050	14	1.1
11UPC11_103	110.2	0.669	2.604	0.059	0.2143	0.0056	0.82962	1299	17	1250	30	1386	17	1386	17	9.8
11UPC11_104	52.6	0.976	9.430	0.160	0.4342	0.0069	0.68234	2380	15	2323	31	2446	16	2446	16	5.0
11UPC11_105	130.1	1.894	1.790	0.024	0.1747	0.0027	0.54423	1042.2	9	1038	15	1051	19	1038	15	0.4
11UPC11_106	85.9	2.93	1.714	0.025	0.1734	0.0026	0.69291	1014.2	9.6	1031	14	984	15	1031	14	1.7
11UPC11_107	78.8	1.456	1.907	0.053	0.1748	0.0033	0.6784	1081	17	1038	18	1166	24	1038	18	4.0
11UPC11_108	227	0.826	0.535	0.009	0.0700	0.0014	0.65956	435	6.2	436.1	8.2	458	17	436.1	8.2	0.3
11UPC11_109	96.5	1.109	1.356	0.017	0.1426	0.0019	0.45208	869.6	7.3	859	10	921	20	859	10	1.2
11UPC11_110	27.8	2.58	2.705	0.052	0.2133	0.0042	0.53193	1328	14	1246	22	1462	22	1462	22	14.8
11UPC11_111	120.9	1.166	4.053	0.051	0.2907	0.0045	0.55405	1644	10	1644	23	1654	13	1654	13	0.6
11UPC11_112	113	1.793	4.159	0.047	0.2872	0.0049	0.55182	1665.3	9.3	1630	24	1727	17	1727	17	5.6
11UPC11_113	253	1.71	2.037	0.046	0.1861	0.0040	0.74115	1128	15	1099	22	1183	20	1099	22	2.6
11UPC11_114	82.1	1.341	15.090	0.250	0.5109	0.0091	0.79086	2820	16	2658	39	2938	11	2938	11	9.5
11UPC11_115	79.3	2.187	4.961	0.065	0.3210	0.0052	0.67261	1813	11	1794	25	1835	14	1835	14	2.2
11UPC11_116	98.2	0.905	1.860	0.038	0.1801	0.0029	0.66735	1069	13	1067	16	1083	14	1067	16	0.2
11UPC11_117	69.6	0.646	8.370	0.340	0.3793	0.0067	0.57352	2264	37	2072	31	2435	54	2435	54	14.9
11UPC11_118	82.7	1.685	2.716	0.040	0.2163	0.0037	0.6986	1332	11	1264	20	1437	14	1437	14	12.0
11UPC11_119	87.1	1.076	5.100	0.084	0.3153	0.0072	0.70356	1835	14	1765	35	1908	16	1908	16	7.5
11UPC11_120	235	0.652	0.569	0.009	0.0715	0.0013	0.68728	458.1	5.8	445.1	7.8	536	18	445.1	7.8	2.8
11UPC11_121	223	1.089	0.561	0.010	0.0727	0.0012	0.45476	452.5	6.1	452.1	7.2	468	18	452.1	7.2	0.1

Table 2a: Indianola Group: Gunnison Plateau: Chicken Creek

Sample Name:								207/235		206/238		206/207		Best age		
Grain #	[U] ppm	U/Th	207/235	2σ error	206/238	2σ error	RHO	Age Ma	2σ error	Age (Ma)	2σ error	Age (Ma)	2σ error	(Ma)	2σ error	% Discordance*
11GPI01_1	85.8	2.306	2.106	0.028	0.1970	0.0025	0.2326	1150.1	9.1	1159	13	1129	12	1159	13	0.8
11GPI01_2	20.11	2.656	4.795	0.066	0.3243	0.0036	0.5786	1783	11	1810	18	1742	13	1742	13	3.9
11GPI01_3	115.5	0.823	0.508	0.008	0.0648	0.0007	0.2465	415.4	5.2	404.6	3.9	471	27	404.6	3.9	2.6
11GPI01_4	379.1	2.37	0.436	0.003	0.0593	0.0005	0.28316	367.5	2.2	371.5	2.8	329	11	371.5	2.8	1.1
11GPI01_5	117.6	1.509	2.261	0.020	0.2137	0.0017	0.53458	1200	6.3	1248.2	8.8	1120	11	1120	8.8	4.0
11GPI01_6	114.8	1.204	0.816	0.010	0.1009	0.0010	0.31792	605.4	5.5	619.3	5.8	579	15	619.3	5.8	2.3
11GPI01_7	80.7	0.488	6.227	0.061	0.3940	0.0036	0.57335	2007.6	8.7	2141	17	1891.6	9.3	1891.6	9.3	13.2
11GPI01_8	883	11.9	4.772	0.033	0.3486	0.0031	0.78522	1779.7	5.7	1927	15	1651.1	6.4	1651.1	6.4	16.7
11GPI01_9	61.2	0.718	4.802	0.077	0.3172	0.0040	0.44345	1784	13	1775	19	1866	20	1866	20	4.9
11GPI01_10	54.5	1.168	1.661	0.054	0.1701	0.0039	0.13149	996	22	1013	21	1080	41	1013	21	1.7
11GPI01_11	181	6.99	1.754	0.026	0.1733	0.0019	0.23683	1027.7	9.5	1030	11	1098	18	1030	11	0.2
11GPI01_12	18.5	0.591	1.638	0.080	0.1698	0.0063	0.23861	981	30	1009	35	1023	61	1009	35	2.9
11GPI01_13	88	0.954	0.083	0.006	0.0128	0.0005	0.079753	80.4	5.6	82	3.1	349	59	82	3.1	2.0
11GPI01_14	15.26	1.083	6.510	0.120	0.6273	0.0096	0.34388	2047	16	3138	38	1086	22	DISC	DISC	189.0
11GPI01_15	256.2	1.747	3.083	0.021	0.2907	0.0018	0.74285	1428.3	5.2	1644.8	9.2	1133.3	7	1133.3	9.2	15.2
11GPI01_16	100.6	1.175	2.238	0.017	0.2149	0.0019	0.59049	1192.9	5.4	1254.6	9.9	1096.9	8.1	1096.9	9.9	5.2
11GPI01_17	206	1.483	4.486	0.055	0.3053	0.0039	0.78173	1730.7	9.7	1717	19	1742.3	6.9	1742.3	6.9	1.5
11GPI01_18	175	0.546	4.737	0.035	0.3170	0.0026	0.69968	1774.2	6.3	1775	13	1778.7	6.7	1778.7	6.7	0.2
11GPI01_19	40.7	0.877	4.030	0.032	0.2890	0.0027	0.61286	1639.9	6.5	1636	14	1660.6	9.8	1660.6	9.8	1.5
11GPI01_20	94.4	0.792	4.546	0.031	0.3074	0.0026	0.67277	1739.8	5.6	1729	13	1763.5	5.9	1763.5	5.9	2.0
11GPI01_21	68.4	1.727	1.577	0.017	0.1624	0.0015	0.36116	960.7	6.8	969.9	8.1	951	11	969.9	8.1	1.0
11GPI01_22	443.1	2.036	3.409	0.035	0.2439	0.0027	0.73783	1506.2	8	1407	14	1669.7	7.1	1669.7	7.1	15.7
11GPI01_22	254	2.13	4.024	0.042	0.2892	0.0028	0.84482	1638.7	8.6	1637	14	1652.2	5.4	1652.2	5.4	0.9

11GPI01_23	278	3.58	0.921	0.043	0.1058	0.0037	0.93134	661	23	648	22	711	33	648	22	2.0
11GPI01_23	130.6	1.733	1.433	0.020	0.1456	0.0025	0.72309	902.4	8.5	876	14	983	14	876	14	2.9
11GPI01_24	83.6	0.7122	0.464	0.006	0.0615	0.0007	0.39208	386.7	4.3	384.5	4.3	404	12	384.5	4.3	0.6
11GPI01_25	390	1.491	0.481	0.005	0.0644	0.0006	0.28781	398.5	3.1	402	3.5	380	14	402	3.5	0.9
11GPI01_26	173	1.275	1.908	0.015	0.1839	0.0013	0.42357	1083.6	5.3	1088.4	7.1	1085.1	8.7	1088.4	7.1	0.4
11GPI01_27	114.1	1.169	0.189	0.005	0.0279	0.0003	0.080824	175.9	4.5	177.5	2.1	201	30	177.5	2.1	0.9
11GPI01_28	105.3	0.721	0.559	0.008	0.0722	0.0008	0.35717	450.5	5.2	449.6	5	465	18	449.6	5	0.2
11GPI01_29	158	4.58	1.492	0.034	0.1506	0.0031	0.82064	927	14	904	17	990	12	904	17	2.5
11GPI01_29	187.2	2.248	1.789	0.035	0.1732	0.0028	0.76044	1040	13	1029	16	1058	15	1029	16	1.1
11GPI01_30	350	1.125	5.044	0.038	0.3268	0.0026	0.57141	1826.5	6.4	1823	12	1828	6.4	1828	6.4	0.3
11GPI01_31	322	1.403	0.824	0.007	0.0991	0.0008	0.55298	610.3	3.7	608.9	4.7	614	10	608.9	4.7	0.2
11GPI01_32	152	0.784	1.126	0.011	0.1295	0.0011	0.4463	766.4	5.1	784.9	6.4	709	13	784.9	6.4	2.4
11GPI01_33	68.8	0.806	3.149	0.080	0.2460	0.0062	0.042766	1444	20	1418	32	1486	22	1486	22	4.6
11GPI01_33	36.1	0.836	3.343	0.053	0.2624	0.0026	0.17645	1490	12	1504	13	1457	17	1457	17	3.2
11GPI01_34	122.2	1.062	10.539	0.085	0.4304	0.0034	0.69901	2482.9	7.5	2307	15	2631.1	5.9	2631.1	5.9	12.3
11GPI01_35	145	1.423	1.734	0.016	0.1744	0.0015	0.55337	1020.8	5.8	1036.3	8.2	993.6	9.6	1036.3	8.2	1.5
11GPI01_36	97.9	1.142	0.095	0.004	0.0141	0.0002	0.27376	91.9	3.4	90.1	1.6	217	49	90.1	1.6	2.0
11GPI01_37	68.2	1.45	4.560	0.038	0.3069	0.0037	0.31699	1741.5	7	1725	18	1754	13	1754	13	1.7
11GPI01_38	118.5	2.305	5.785	0.035	0.3576	0.0025	0.36492	1943.9	5.2	1971	12	1921.9	8.2	1921.9	8.2	2.6
11GPI01_39	11.01	0.2557	4.119	0.065	0.2969	0.0039	0.45993	1657	13	1675	19	1628	17	1628	17	2.9
11GPI01_40	191.1	1.948	0.779	0.010	0.0923	0.0009	0.63677	584.6	5.8	569.2	5	655	12	569.2	5	2.6
11GPI01_41	64	1.55	1.658	0.022	0.1696	0.0016	0.29329	991.9	8.2	1009.7	8.7	956	15	1009.7	8.7	1.8
11GPI01_42	67.4	1.504	2.225	0.023	0.2037	0.0018	0.46763	1188.5	7.1	1195.1	9.5	1175	16	1195.1	9.5	0.6
11GPI01_43	147	16.6	1.901	0.084	0.1837	0.0052	0.8254	1079	28	1087	28	1058	38	1087	28	0.7
11GPI01_43	35.9	1.09	3.455	0.092	0.2646	0.0057	0.62524	1515	21	1513	29	1540	25	1540	25	1.8
11GPI01_44	183.9	1.063	1.287	0.060	0.0978	0.0017	0.72775	833	27	601	10	1508	67	601	10	27.9
11GPI01_45	19	1.51	2.073	0.049	0.1973	0.0036	0.49617	1142	17	1160	19	1118	19	1160	19	1.6
11GPI01_46	38.29	0.841	5.145	0.048	0.3394	0.0040	0.50561	1844	7.8	1883	19	1794	12	1794	12	5.0
11GPI01_47	213.9	2.36	2.051	0.039	0.1897	0.0037	0.97162	1131	14	1119	20	1142	13	1119	20	1.1
11GPI01_48	234.7	1.924	3.685	0.026	0.2836	0.0016	0.58025	1567.9	5.6	1609.2	7.9	1510.7	7.4	1510.7	7.4	6.5

11GPI01_49	47.37	1.972	4.682	0.044	0.3163	0.0031	0.43665	1764.5	7.7	1771	15	1750	13	1750	13	1.2
11GPI01_50	108.5	0.5641	5.205	0.049	0.3400	0.0030	0.65132	1853.9	7.8	1886	15	1806.6	7.1	1806.6	7.1	4.4
11GPI01_51	125.8	2.376	4.399	0.027	0.3011	0.0024	0.679	1712.8	4.9	1697	12	1723.3	6.7	1723.3	6.7	1.5
11GPI01_52	76.2	0.75	0.894	0.013	0.1062	0.0012	0.27893	648.3	7.2	650.7	6.9	634	15	650.7	6.9	0.4
11GPI01_53	163	0.7254	5.552	0.040	0.3544	0.0032	0.63353	1908.3	6.2	1957	15	1843.2	6.7	1843.2	6.7	6.2
11GPI01_54	52.7	0.5626	1.583	0.020	0.1592	0.0018	0.2525	964.1	7.9	952.2	9.8	963	19	952.2	9.8	1.2
11GPI01_55	545	2.525	4.680	0.100	0.3058	0.0076	0.96692	1763	19	1718	38	1795.3	9.1	1795.3	9.1	4.3
11GPI01_56	121.3	1.06	3.175	0.028	0.2523	0.0020	0.59199	1452.5	6.8	1450	10	1437.3	7.6	1437.3	7.6	0.9
11GPI01_57	41.2	1.157	2.018	0.027	0.1860	0.0023	0.4001	1123.3	9.1	1100	12	1149	15	1100	12	2.1
11GPI01_58	64.2	1.8	0.743	0.012	0.0908	0.0010	0.28111	563.9	7	560.4	6.2	562	21	560.4	6.2	0.6
11GPI01_59	36.7	0.5415	0.735	0.016	0.0913	0.0011	0.034782	560.3	8.9	562.9	6.4	532	35	562.9	6.4	0.5
11GPI01_60	72.1	0.5314	2.879	0.030	0.2339	0.0028	0.62783	1375.9	7.8	1355	14	1401	11	1401	11	3.3
11GPI01_61	54	0.748	2.042	0.028	0.1940	0.0022	0.30806	1128.9	9.2	1143	12	1108	20	1143	12	1.2
11GPI01_62	196	4.02	5.147	0.049	0.3327	0.0034	0.7375	1844.4	8	1851	16	1816.5	7.2	1816.5	7.2	1.9
11GPI01_63	44.5	1.923	0.904	0.019	0.1064	0.0011	0.40841	653	10	651.8	6.6	672	28	651.8	6.6	0.2
11GPI01_64	52.2	1.425	1.992	0.028	0.1886	0.0023	0.45992	1112.2	9.3	1114	12	1100	12	1114	12	0.2
11GPI01_65	127	1.81	1.861	0.020	0.1829	0.0017	0.56892	1067	7	1082.8	9.1	1031.3	9.9	1082.8	9.1	1.5
11GPI01_66	97.8	1.897	1.840	0.020	0.1804	0.0019	0.3603	1059.6	7	1071	10	1037	12	1071	10	1.1
11GPI01_67	322.1	4.509	1.111	0.007	0.1252	0.0010	0.38616	758.6	3.5	760.1	5.6	746.6	9.8	760.1	5.6	0.2
11GPI01_68	41.6	0.694	1.819	0.026	0.1739	0.0022	0.27445	1053.7	9.2	1033	12	1060	22	1033	12	2.0
11GPI01_69	83.4	0.7207	2.285	0.026	0.2046	0.0019	0.61826	1208	8	1200	10	1209	11	1209	11	0.7
11GPI01_70	44.4	0.965	1.963	0.030	0.1878	0.0020	0.22329	1102	10	1109	11	1072	15	1109	11	0.6
11GPI01_71	190	1.694	0.443	0.005	0.0591	0.0005	0.39285	372.4	3.7	370.2	3.2	375	18	370.2	3.2	0.6
11GPI01_72	246.6	2.71	4.928	0.059	0.2975	0.0041	0.76387	1807	10	1682	21	1938.7	9.2	1938.7	9.2	13.2
11GPI01_73	113.6	1.42	0.912	0.011	0.1083	0.0012	0.36006	658	5.7	662.9	6.9	639	17	662.9	6.9	0.7
11GPI01_74	32.53	1.134	2.553	0.036	0.2115	0.0029	0.28114	1286	10	1236	15	1397	17	1397	17	11.5
11GPI01_75	199.7	0.705	0.846	0.009	0.1032	0.0007	0.35935	622.3	5.1	632.9	4.2	597	12	632.9	4.2	1.7
11GPI01_76	447	13.2	1.940	0.017	0.1881	0.0016	0.66503	1094.6	5.7	1110.7	8.8	1077.9	8.2	1110.7	8.8	1.5
11GPI01_77	81.1	0.915	3.037	0.036	0.2370	0.0026	0.049179	1416.1	9.1	1371	13	1485	27	1485	27	7.7
11GPI01_78	26.9	0.712	2.806	0.039	0.2329	0.0033	0.14349	1356	10	1349	17	1393	19	1393	19	3.2

11GPI01_79	92.2	1.732	2.947	0.028	0.2467	0.0023	0.50172	1393.6	7.2	1421	12	1362.1	8.8	1362.1	8.8	4.3
11GPI01_80	104.4	0.929	3.126	0.028	0.2517	0.0023	0.50034	1438.8	7	1447	12	1439	11	1439	11	0.6
11GPI01_81	176.4	4.39	3.463	0.063	0.2590	0.0041	0.84622	1522	14	1487	22	1572	12	1572	12	5.4
11GPI01_82	124	0.904	2.227	0.024	0.2073	0.0022	0.54694	1190.1	7.9	1214	12	1147	14	1147	12	2.0
11GPI01_83	48.2	0.894	13.200	0.210	0.4750	0.0085	0.73992	2693	15	2505	37	2835	10	2835	10	11.6
11GPI01_84	139	1.077	5.698	0.042	0.3584	0.0027	0.68625	1930.6	6.4	1974	13	1886.6	7.6	1886.6	7.6	4.6
11GPI01_85	178	1.341	5.028	0.032	0.3338	0.0026	0.42432	1824.5	5.3	1857	13	1789.3	6.3	1789.3	6.3	3.8
11GPI01_86	349	0.676	0.583	0.012	0.0682	0.0024	0.17846	465.6	7.4	425	15	790	100	425	15	8.7
11GPI01_87	223	0.3068	0.452	0.006	0.0609	0.0004	0.19852	378.9	4	381.1	2.5	361	16	381.1	2.5	0.6
11GPI01_88	30.86	0.788	4.225	0.054	0.3022	0.0034	0.55524	1678	11	1704	17	1655	10	1655	10	3.0
11GPI01_89	25.7	0.4827	3.387	0.052	0.2634	0.0031	0.016106	1500	12	1507	16	1502	18	1502	18	0.3
11GPI01_90	19.87	0.71	2.015	0.043	0.1903	0.0030	0.25621	1118	15	1123	16	1122	23	1123	16	0.4
11GPI01_91	51.2	2.255	1.470	0.034	0.1450	0.0027	0.43924	917	14	873	15	1033	19	873	15	4.8
11GPI01_91	41.9	1.43	1.908	0.043	0.1797	0.0035	0.53885	1083	15	1065	19	1115	18	1065	19	1.7
11GPI01_92	176.9	1.921	4.851	0.045	0.3295	0.0034	0.87137	1793.3	7.7	1835	16	1754.9	7.9	1754.9	7.9	4.6
11GPI01_93	130.5	0.7364	2.464	0.021	0.2223	0.0018	0.43859	1262.1	6	1293.9	9.6	1223.4	9.3	1223.4	9.3	5.8
11GPI01_94	91.8	0.871	6.736	0.075	0.3818	0.0051	0.63485	2076.8	9.9	2084	24	2071	11	2071	11	0.6
11GPI01_95	45.4	1.162	0.850	0.015	0.1033	0.0010	0.093834	626.2	8.1	633.8	6	597	30	633.8	6	1.2
11GPI01_96	61.4	0.655	0.851	0.016	0.1017	0.0011	0.30372	624.4	8.6	624.1	6.2	617	21	624.1	6.2	0.0
11GPI01_97	94.9	1.134	1.896	0.017	0.1810	0.0014	0.339	1079.4	6.1	1072.3	7.4	1089	11	1072.3	7.4	0.7
11GPI01_98	131.7	0.891	1.942	0.024	0.1823	0.0019	0.47209	1094.9	8.4	1079	10	1125	24	1079	10	1.5
11GPI01_99	559	0.887	0.335	0.005	0.0329	0.0006	0.2415	293.6	3.7	208.3	3.6	1036	27	208.3	3.6	29.1
11GPI01_100	117.2	1.384	2.503	0.021	0.2193	0.0017	0.45078	1272.7	6	1278.2	9.1	1254.5	9	1254.5	9	1.9
11GPI01_101	54	0.872	0.575	0.016	0.0725	0.0008	0.17211	460	10	450.9	4.8	498	39	450.9	4.8	2.0
11GPI01_102	25	1.241	9.200	0.240	0.3390	0.0110	0.92146	2356	24	1880	53	2807	13	DISC	DISC	33.0
11GPI01_102	9.09	1.083	15.190	0.270	0.5484	0.0090	0.26761	2826	17	2818	38	2826	22	2826	22	0.3
11GPI01_103	251.7	1.631	5.034	0.046	0.3016	0.0026	0.72443	1825.5	7.9	1699	13	1973.9	7.8	1973.9	7.8	13.9
11GPI01_104	165.8	0.922	12.679	0.087	0.4955	0.0040	0.66678	2655.7	6.4	2594	17	2704	6.2	2704	6.2	4.1
11GPI01_105	365	2.022	1.919	0.012	0.1860	0.0015	0.59101	1087.6	4.2	1099.6	8	1056.6	8.7	1099.6	8	1.1
11GPI01_106	37.8	1.15	2.062	0.026	0.1933	0.0019	0.14228	1135.7	8.6	1139	10	1132	18	1139	10	0.3

11GPI01_107	73.1	1.122	1.972	0.021	0.1881	0.0015	0.34633	1105.5	7.1	1110.9	8	1078	12	1110.9	8	0.5
11GPI01_108	151.8	1.711	4.678	0.047	0.2939	0.0030	0.67848	1762.9	8.3	1663	15	1886	8.1	1886	8.1	11.8
11GPI01_109	84.6	2.087	1.842	0.026	0.1826	0.0024	0.67926	1059.9	9.1	1081	13	1035	14	1081	13	2.0
11GPI01_110	84.2	0.82	4.809	0.043	0.3123	0.0030	0.44414	1786	7.5	1752	15	1832.2	9.3	1832.2	9.3	4.4
11GPI01_111	48.6	1.589	0.337	0.014	0.0457	0.0015	0.32575	294	10	287.8	9.2	427	54	287.8	9.2	2.1
11GPI01_112	60.2	0.885	1.871	0.027	0.1739	0.0016	0.3962	1071.3	9.8	1033.7	8.9	1144	18	1033.7	8.9	3.5
11GPI01_113	85	1.029	1.678	0.018	0.1679	0.0019	0.29287	999.7	6.8	1000	11	995	20	1000	11	0.0
11GPI01_114	45.3	2.514	2.458	0.031	0.2184	0.0027	0.31244	1260.4	8.8	1273	14	1234	16	1234	16	3.2
11GPI01_115	85	0.965	4.918	0.047	0.3317	0.0038	0.26495	1805	8.1	1846	18	1764	15	1764	15	4.6
11GPI01_116	222	4.617	7.210	0.130	0.3254	0.0054	0.8869	2141	16	1816	26	2485	11	2485	11	26.9
11GPI01_116	189.2	3.974	8.600	0.110	0.3731	0.0046	0.69185	2296	12	2044	22	2521.6	9	2521.6	9	18.9
11GPI01_117	51.4	1.095	2.972	0.027	0.2409	0.0020	0.32959	1400.1	6.9	1391	10	1402	9.7	1402	9.7	0.8
11GPI01_118	101.3	3.066	1.922	0.019	0.1880	0.0021	0.65084	1089.2	6.5	1110	11	1035	11	1110	11	1.9
11GPI01_119	185	1.473	0.882	0.009	0.1046	0.0009	0.3912	642.9	4.8	641.1	5.2	634	14	641.1	5.2	0.3
11GPI01_120	63.11	0.7202	0.263	0.007	0.0373	0.0005	0.19012	236.8	5.3	236	3.4	295	32	236	3.4	0.3
11GPI01_121	185.7	1.379	1.797	0.028	0.1659	0.0030	0.85703	1046	9.8	989	17	1160	11	989	17	5.4
11GPI02_1	76.2	1.0126	2.010	0.023	0.1932	0.0018	0.048957	1118.4	7.6	1138.4	9.8	1078	13	1138.4	9.8	1.8
11GPI02_2	15.8	1.24	2.152	0.040	0.1995	0.0028	0.16085	1164	13	1172	15	1145	25	1172	15	0.7
11GPI02_3	68.3	1.245	1.747	0.020	0.1742	0.0016	0.41126	1025.7	7.3	1035.1	8.9	999	14	1035.1	8.9	0.9
11GPI02_4	48.9	2.153	4.415	0.059	0.2895	0.0033	0.67143	1714	11	1641	17	1824	13	1824	13	10.0
11GPI02_5	246	1.241	1.826	0.014	0.1796	0.0015	0.7222	1055.4	5	1064.9	8.4	1036.1	7.1	1064.9	8.4	0.9
11GPI02_6	78.1	1.09	3.432	0.036	0.2691	0.0023	0.50238	1512.4	8	1536	12	1486	10	1486	10	3.4
11GPI02_7	72.6	1.555	3.246	0.041	0.2595	0.0031	0.53006	1467.5	9.8	1487	16	1453	12	1453	12	2.3
11GPI02_8	40.1	0.957	4.258	0.059	0.3025	0.0036	0.72348	1686	12	1703	18	1671.8	9.8	1671.8	9.8	1.9
11GPI02_9	97	0.4955	4.308	0.034	0.3120	0.0025	0.42392	1696.2	6.8	1750	12	1643	8.8	1643	8.8	6.5
11GPI02_10	231.9	6.7	4.425	0.038	0.3127	0.0032	0.71894	1717.4	7.3	1753	16	1676.8	7.3	1676.8	7.3	4.5
11GPI02_11	80.5	0.925	4.253	0.049	0.3029	0.0033	0.38908	1684.9	9.2	1705	16	1677	13	1677	13	1.7
11GPI02_12	64.1	1.377	1.642	0.021	0.1522	0.0022	0.39429	986.1	8.1	913	13	1153	18	913	13	7.4

11GPI02_13	48.6	1.736	2.029	0.023	0.2009	0.0020	0.11402	1124.9	7.9	1180	11	1052	21	1180	11	4.9
11GPI02_14	61.67	0.925	0.528	0.011	0.0700	0.0008	0.040321	429.7	7	436.3	4.8	438	30	436.3	4.8	1.5
11GPI02_15	59.4	4.521	1.780	0.019	0.1756	0.0016	0.24718	1038.7	6.8	1042.5	8.5	1038	13	1042.5	8.5	0.4
11GPI02_16	110	1.207	1.978	0.019	0.1908	0.0015	0.52941	1107.5	6.6	1125.6	8.1	1090	11	1125.6	8.1	1.6
11GPI02_17	51.9	1.169	1.830	0.026	0.1794	0.0022	0.1416	1055.4	9.4	1065	12	1044	18	1065	12	0.9
11GPI02_18	145.8	1.296	3.226	0.028	0.2589	0.0021	0.57531	1463.1	6.7	1484	11	1439.5	7.8	1439.5	7.8	3.1
11GPI02_19	43.9	0.577	10.430	0.170	0.4244	0.0085	0.82058	2476	14	2279	38	2643	10	2643	10	13.8
11GPI02_19	28.5	0.471	12.600	0.220	0.5096	0.0093	0.78729	2651	17	2654	40	2661	12	2661	12	0.3
11GPI02_20	117.7	1.385	2.427	0.026	0.2169	0.0024	0.47604	1250.4	7.8	1265	13	1216	11	1216	11	4.0
11GPI02_21	298	1.182	0.509	0.009	0.0642	0.0010	0.48542	417.5	6.1	400.9	5.8	510	28	400.9	5.8	4.0
11GPI02_22	123.8	1.639	1.979	0.018	0.1932	0.0018	0.39768	1109.1	6	1138.7	9.6	1025	14	1138.7	9.6	2.7
11GPI02_23	100.3	0.678	2.766	0.026	0.2304	0.0018	0.31945	1346.7	6.9	1336.4	9.4	1349	11	1349	11	0.9
11GPI02_24	197	1.89	3.573	0.025	0.2716	0.0026	0.64497	1544.3	5.3	1548	13	1509	8.5	1509	8.5	2.6
11GPI02_25	270	1.78	2.238	0.030	0.2023	0.0027	0.84721	1193.6	9.2	1188	14	1179	8.6	1188	14	0.5
11GPI02_26	295	25.9	1.917	0.034	0.1824	0.0030	0.9481	1086	12	1080	16	1074	12	1080	16	0.6
11GPI02_27	75.7	1.889	5.755	0.069	0.3644	0.0042	0.66897	1939	10	2003	20	1862.5	9.7	1862.5	9.7	7.5
11GPI02_28	10.96	0.614	2.522	0.053	0.2142	0.0045	0.46512	1276	15	1254	24	1330	26	1330	26	5.7
11GPI02_29	73.3	0.652	12.899	0.096	0.5154	0.0041	0.60718	2671.9	7	2679	17	2669.7	8.1	2669.7	8.1	0.3
11GPI02_30	238	2.46	2.029	0.019	0.1950	0.0018	0.69306	1125	6.4	1148.1	9.9	1086.9	8.8	1148.1	9.9	2.1
11GPI02_31	225	2.214	2.020	0.024	0.1926	0.0018	0.64205	1121.7	7.9	1135.2	9.8	1093	12	1135.2	9.8	1.2
11GPI02_32	61.9	1.329	2.069	0.022	0.1942	0.0020	0.34097	1138.1	7.2	1144	11	1147	15	1144	11	0.5
11GPI02_33	259	0.5901	3.393	0.025	0.2685	0.0022	0.46574	1502.5	5.7	1533	11	1459.4	7.8	1459.4	7.8	5.0
11GPI02_34	213.3	4.89	2.731	0.086	0.2312	0.0057	0.78579	1336	23	1340	30	1356	35	1356	35	1.2
11GPI02_34	132.8	3.329	3.457	0.032	0.2671	0.0023	0.59094	1518.4	7	1526	12	1503	11	1503	11	1.5
11GPI02_35	47.9	1.622	1.653	0.024	0.1702	0.0023	0.52507	990.1	9.3	1013	13	966	16	1013	13	2.3
11GPI02_36	70.8	0.988	2.049	0.024	0.1965	0.0021	0.36909	1131.5	8.1	1156	12	1109	14	1156	12	2.2
11GPI02_37	58.7	1.32	4.781	0.056	0.3307	0.0038	0.6774	1780.8	9.8	1841	18	1725.4	8.5	1725.4	8.5	6.7
11GPI02_38	90.5	0.7231	1.729	0.018	0.1711	0.0015	0.25228	1019	6.7	1018.1	8.5	1024	14	1018.1	8.5	0.1
11GPI02_39	15.45	0.3927	1.355	0.039	0.1363	0.0026	0.40406	870	16	825	14	1005	37	825	14	5.2
11GPI02_40	78	1.151	1.991	0.028	0.1889	0.0026	0.38096	1111.8	9.5	1115	14	1135	20	1115	14	0.3

11GPI02_41	38.63	1.721	2.497	0.030	0.2142	0.0021	0.33134	1270.4	8.6	1251	11	1345	16	1345	16	7.0
11GPI02_42	14.92	1.509	1.958	0.038	0.1913	0.0031	0.40403	1100	13	1128	17	1079	30	1128	17	2.5
11GPI02_43	233.3	5.9	2.502	0.028	0.2223	0.0022	0.75532	1272	8.1	1295	11	1249.2	9.2	1249.2	9.2	3.7
11GPI02_44	72.6	1.679	2.104	0.027	0.1966	0.0017	0.22796	1149.3	8.9	1157	9.2	1149	18	1157	9.2	0.7
11GPI02_45	132.5	1.999	14.300	0.110	0.5503	0.0052	0.77504	2771.4	7.6	2826	21	2743.9	6.3	2743.9	6.3	3.0
11GPI02_46	43.7	2.62	5.645	0.062	0.3621	0.0032	0.40377	1923.5	9.3	1992	15	1873	12	1873	12	6.4
11GPI02_47	33.7	1.002	0.774	0.016	0.0956	0.0014	0.3034	581.1	9.2	588.5	8.4	569	26	588.5	8.4	1.3
11GPI02_48	314	2.212	4.394	0.049	0.3002	0.0035	0.75066	1711.8	9	1692	17	1756.7	9.3	1756.7	9.3	3.7
11GPI02_49	140.5	0.996	3.703	0.031	0.2812	0.0027	0.90424	1571.7	6.7	1597	13	1554.1	8.5	1554.1	8.5	2.8
11GPI02_50	146.7	2.7	3.421	0.035	0.2597	0.0028	0.69061	1508.7	8.1	1488	14	1557.9	9.8	1557.9	9.8	4.5
11GPI02_51	46.6	0.5646	2.956	0.035	0.2479	0.0026	0.76158	1397.1	9.3	1427	13	1349	13	1349	13	5.8
11GPI02_52	95.3	3.26	0.538	0.010	0.0700	0.0009	0.29603	436.6	6.4	436	5.5	470	26	436	5.5	0.1
11GPI02_53	501	12.6	2.978	0.043	0.2472	0.0041	0.85406	1405	10	1424	21	1384.2	8.6	1384.2	8.6	2.9
11GPI02_54	107.3	1.485	2.941	0.024	0.2446	0.0024	0.38982	1393.1	6.3	1410	12	1378.6	8.5	1378.6	8.5	2.3
11GPI02_55	71	1.445	4.220	0.044	0.2907	0.0029	0.59699	1677.2	8.7	1645	15	1735.4	8.8	1735.4	8.8	5.2
11GPI02_56	177	1.487	2.078	0.017	0.1961	0.0016	0.47376	1141.2	5.5	1154.3	8.6	1136.5	9.9	1154.3	8.6	1.1
11GPI02_57	220	31.8	3.308	0.075	0.2577	0.0054	0.57659	1482	18	1478	28	1491	26	1491	26	0.9
11GPI02_57	58.6	1.82	4.148	0.054	0.3020	0.0035	0.55436	1665	10	1701	17	1646	13	1646	13	3.3
11GPI02_58	74.5	1.806	0.757	0.013	0.0929	0.0012	0.31633	573.8	7.7	572.3	7.2	583	20	572.3	7.2	0.3
11GPI02_59	24.86	0.712	3.374	0.055	0.2612	0.0041	0.85258	1497	13	1495	21	1502	13	1502	13	0.5
11GPI02_60	207	2.41	4.439	0.040	0.3092	0.0029	0.69421	1719.2	7.5	1737	14	1701.6	8	1701.6	8	2.1
11GPI02_61	24.6	1.07	1.774	0.028	0.1767	0.0022	0.21826	1035	10	1049	12	1010	18	1049	12	1.4
11GPI02_62	159.1	1.647	2.161	0.016	0.2019	0.0021	0.57584	1169.8	5.4	1186	11	1145	11	1186	11	1.4
11GPI02_63	180.1	1.74	2.441	0.016	0.2198	0.0018	0.56343	1254.5	4.9	1280.9	9.5	1205.5	7.7	1205.5	7.7	6.3
11GPI02_64	30.3	1.29	1.665	0.047	0.1648	0.0038	0.42057	994	18	983	21	1014	31	983	21	1.1
11GPI02_65	102.8	1.017	10.820	0.170	0.4605	0.0069	0.72383	2512	13	2441	30	2570	14	2570	14	5.0
11GPI02_65	70.3	0.779	11.870	0.120	0.5097	0.0063	0.6307	2593.8	9.6	2655	27	2548.2	7.1	2548.2	7.1	4.2
11GPI02_66	293	5.34	2.052	0.015	0.1968	0.0016	0.53289	1132.8	4.9	1157.9	8.5	1098.2	7.9	1157.9	8.5	2.2
11GPI02_67	264	2.039	2.244	0.020	0.2081	0.0017	0.69692	1195.5	6.3	1218.8	9	1164.7	8.7	1164.7	9	1.9
11GPI02_68	36.9	2.398	3.076	0.034	0.2442	0.0029	0.6208	1426	8.5	1408	15	1444	12	1444	12	2.5

11GPI02_69	130	1.89	3.190	0.049	0.2561	0.0040	0.95355	1453	12	1469	20	1430	15	1430	15	2.7
11GPI02_70	47.52	1.5	3.038	0.037	0.2505	0.0025	0.44717	1418.7	9.6	1441	13	1387	16	1387	16	3.9
11GPI02_71	97	1.633	2.641	0.027	0.2232	0.0020	0.66964	1311.5	7.5	1299	11	1328.9	8.1	1328.9	8.1	2.2
11GPI02_72	40.9	1.565	2.823	0.043	0.2297	0.0032	0.44716	1361	11	1332	17	1398	19	1398	19	4.7
11GPI02_73	155.7	0.342	2.404	0.065	0.1535	0.0031	0.5518	1242	19	920	17	1862	32	920	17	25.9
11GPI02_73	105.3	0.2269	3.196	0.086	0.1873	0.0041	0.85532	1454	21	1106	22	1989	19	1106	22	23.9
11GPI02_74	57.7	2.597	1.999	0.022	0.1905	0.0019	0.57496	1114.6	7.5	1124	10	1079.4	9.1	1124	10	0.8
11GPI02_75	57.5	1.289	1.767	0.024	0.1762	0.0019	0.32753	1032.7	8.7	1046	10	980	16	1046	10	1.3
11GPI02_76	464	2.275	1.842	0.013	0.1802	0.0014	0.58388	1060.3	4.7	1068	7.7	1038	7.5	1068	7.7	0.7
11GPI02_77	244	2.43	1.924	0.015	0.1818	0.0011	0.47429	1089.3	5.2	1077.4	6.1	1098	8.4	1077.4	6.1	1.1
11GPI02_78	118.4	1.94	2.208	0.033	0.2003	0.0021	0.76107	1185	11	1177	11	1196	12	1177	11	0.7
11GPI02_79	73	1.405	1.969	0.022	0.1882	0.0016	0.25688	1105.3	7.6	1111.4	8.5	1093	14	1111.4	8.5	0.6
11GPI02_80	166	1.486	2.817	0.021	0.2318	0.0022	0.58857	1360	5.5	1344	12	1382.3	8.7	1382.3	8.7	2.8
11GPI02_81	246	4.99	2.036	0.016	0.1947	0.0016	0.56583	1127.4	5.3	1146.5	8.8	1091.1	7	1146.5	8.8	1.7
11GPI02_82	209.1	2.406	2.149	0.016	0.2016	0.0015	0.51661	1165.4	5.4	1183.8	8.1	1137.6	9.3	1183.8	8.1	1.6
11GPI02_83	54.1	1.549	1.950	0.024	0.1803	0.0021	0.36747	1098.1	8.1	1069	12	1166	19	1069	12	2.7
11GPI02_84	436	1.011	1.568	0.016	0.1620	0.0017	0.8438	957.2	6.3	968	9.6	935.8	7.7	968	9.6	1.1
11GPI02_85	97.5	1.373	2.527	0.030	0.2270	0.0026	0.52715	1279.3	8.5	1319	14	1220	13	1220	13	8.1
11GPI02_86	186	0.865	2.857	0.029	0.2421	0.0027	0.63244	1370	7.5	1398	14	1320	13	1320	13	5.9
11GPI02_87	152	2.497	1.926	0.023	0.1868	0.0020	0.62087	1089.6	7.9	1104	11	1080	11	1104	11	1.3
11GPI02_88	215.3	1.0852	1.962	0.017	0.1894	0.0020	0.69371	1103.9	5.8	1118	11	1081.9	9.4	1118	11	1.3
11GPI02_89	452	9.2	2.027	0.035	0.1873	0.0035	0.80688	1124	12	1106	19	1161	15	1106	19	1.6
11GPI02_90	53.4	0.901	14.370	0.130	0.5419	0.0063	0.6406	2774	8.3	2790	27	2767.3	8.8	2767.3	8.8	0.8
11GPI02_91	75.9	2.59	3.967	0.042	0.2869	0.0029	0.67837	1626.9	8.6	1626	15	1634	10	1634	10	0.5
11GPI02_92	112	0.6981	5.528	0.042	0.3430	0.0027	0.73325	1904.5	6.5	1901	13	1906.2	6.5	1906.2	6.5	0.3
11GPI02_93	269	1.518	0.610	0.013	0.0772	0.0016	0.84989	483.3	8.3	479.5	9.4	487	12	479.5	9.4	0.8
11GPI02_94	55.5	1.944	2.042	0.031	0.1913	0.0023	0.62154	1133	11	1128	13	1136	14	1128	13	0.4
11GPI02_95	19.58	1.893	4.142	0.064	0.2977	0.0050	0.61631	1661	13	1679	25	1633	16	1633	16	2.8
11GPI02_96	39.53	2.47	4.386	0.046	0.3115	0.0027	0.54031	1710.2	8.9	1750	13	1666	10	1666	10	5.0
11GPI02_97	120.9	1.0819	1.953	0.020	0.1847	0.0021	0.49707	1099	7	1094	12	1104	12	1094	12	0.5

11GPI02_98	164.1	4.55	2.085	0.018	0.1972	0.0021	0.58654	1143.5	6	1161	11	1100.6	8.5	1161	11	1.5
11GPI02_99	86.8	1.068	5.553	0.054	0.3543	0.0034	0.62075	1908.2	8.4	1957	16	1858.3	9.6	1858.3	9.6	5.3
11GPI02_100	104.6	1.567	4.397	0.039	0.2983	0.0024	0.61577	1711.3	7.3	1683	12	1733.7	7.6	1733.7	7.6	2.9
11GPI02_101	178	1.306	3.580	0.100	0.2330	0.0065	0.94088	1544	22	1350	34	1813	18	1813	18	25.5
11GPI02_101	333	1.343	4.793	0.060	0.3119	0.0043	0.83596	1784	11	1750	21	1812.5	7.6	1812.5	7.6	3.4
11GPI02_102	225	1.519	2.016	0.013	0.1919	0.0013	0.39579	1121.2	4.6	1131.5	7	1096.2	9.3	1131.5	7	0.9
11GPI02_103	124	1.871	4.459	0.055	0.3059	0.0040	0.76154	1723	10	1720	20	1712.7	8.2	1712.7	8.2	0.4
11GPI02_104	340	0.4555	4.228	0.030	0.3007	0.0022	0.67292	1679.1	5.8	1695	11	1661.7	6.5	1661.7	6.5	2.0
11GPI02_105	244	1.951	2.080	0.015	0.1966	0.0014	0.60597	1141.9	5.1	1156.9	7.4	1105.5	7.6	1156.9	7.4	1.3
11GPI02_106	43.7	0.908	0.919	0.016	0.1109	0.0015	0.23003	662.2	8.5	677.6	8.8	631	27	677.6	8.8	2.3
11GPI02_107	68.3	2.48	1.865	0.020	0.1849	0.0018	0.25059	1070.2	6.6	1093.5	9.8	1033	12	1093.5	9.8	2.2
11GPI02_108	260	1.425	2.330	0.037	0.1955	0.0041	0.65826	1221	11	1151	22	1350	22	1151	22	5.7
11GPI02_108	121.4	2.22	2.667	0.046	0.2312	0.0051	0.76866	1321	13	1340	27	1302	13	1302	13	2.9
11GPI02_109	71.4	0.992	4.688	0.039	0.3212	0.0029	0.58605	1765.5	7.1	1795	14	1741	10	1741	10	3.1
11GPI02_110	156	3.25	3.410	0.031	0.2719	0.0026	0.73697	1506.2	7.1	1550	13	1448.6	7.2	1448.6	7.2	7.0
11GPI02_111	204.5	1.325	2.855	0.027	0.2370	0.0019	0.57966	1369.6	7.2	1371.1	9.8	1379	12	1379	12	0.6
11GPI02_112	203	1.56	5.358	0.043	0.3295	0.0031	0.61281	1877.7	6.9	1835	15	1922	8.8	1922	8.8	4.5
11GPI02_113	94.3	1.229	1.983	0.029	0.1880	0.0029	0.49995	1110.6	9.4	1112	15	1107	13	1112	15	0.1
11GPI02_114	196	1.22	1.859	0.015	0.1835	0.0018	0.49285	1066.4	5.4	1085.8	9.7	1028	12	1085.8	9.7	1.8
11GPI02_115	108.8	1.953	3.220	0.031	0.2561	0.0024	0.86957	1461.6	7.6	1470	13	1438.2	5.9	1438.2	5.9	2.2
11GPI02_116	225.7	0.9744	3.001	0.020	0.2452	0.0017	0.54865	1408.4	5.1	1415	9.1	1380.4	7	1380.4	7	2.5
11GPI02_117	29.3	0.363	0.558	0.021	0.0722	0.0017	0.47919	449	14	449	10	488	41	449	10	0.0
11GPI02_118	194	2.768	2.657	0.037	0.1947	0.0034	0.75376	1318.4	9.8	1146	18	1596	12	1146	18	13.1
11GPI02_119	202.8	2.27	3.874	0.043	0.2800	0.0023	0.66576	1609	8.8	1591	12	1621	12	1621	12	1.9
11GPI02_120	26.74	1.434	1.552	0.025	0.1597	0.0021	0.36158	951.7	9.5	955	12	945	19	955	12	0.3
11GPI02_121	85.3	1.151	3.103	0.050	0.2350	0.0038	0.060648	1433	12	1360	20	1526	39	1526	39	10.9
13GPI03_1	42.2	1.257	1.731	0.023	0.1592	0.0014	0.38014	1019.4	8.7	952.1	8	1147	13	952.1	8	6.6
13GPI03_2	67.4	1.978	5.300	0.040	0.3396	0.0020	0.46297	1868.5	6.4	1884.7	9.8	1860	7.6	1860	7.6	1.3

13GPI03_3	48.2	0.996	2.077	0.029	0.1921	0.0022	0.70382	1140.4	9.5	1132	12	1158	13	1132	12	0.7
13GPI03_4	107.4	1.64	1.965	0.017	0.1903	0.0013	0.39835	1104	5.7	1122.8	7	1071	11	1122.8	7	1.7
13GPI03_5	17.1	0.948	1.553	0.032	0.1507	0.0021	0.40187	952	12	905	12	1057	25	905	12	4.9
13GPI03_6	167	3.62	4.575	0.050	0.3176	0.0034	0.96452	1743.9	9.2	1777	17	1706.8	4.9	1706.8	4.9	4.1
13GPI03_7	60.1	1.02	4.350	0.039	0.3069	0.0025	0.55402	1702.3	7.5	1727	12	1680.4	8.2	1680.4	8.2	2.8
13GPI03_8	153.2	1.609	1.916	0.015	0.1876	0.0014	0.59163	1086.3	5.2	1108.5	7.7	1046.2	7.8	1108.5	7.7	2.0
13GPI03_9	66.19	0.3093	8.950	0.110	0.3443	0.0048	0.90881	2332	12	1907	23	2705.8	7.1	2705.8	7.1	29.5
13GPI03_10	346	2.114	1.675	0.016	0.1657	0.0017	0.79226	998.7	5.9	988.3	9.3	1034.9	6.6	988.3	9.3	1.0
13GPI03_10	133.9	2.499	1.924	0.029	0.1879	0.0035	0.84141	1089	10	1110	19	1049	15	1110	19	1.9
13GPI03_11	241.9	1.85	4.888	0.028	0.3255	0.0020	0.66369	1800	4.8	1816.5	9.8	1784.7	5.2	1784.7	5.2	1.8
13GPI03_12	187.5	0.801	3.455	0.069	0.2504	0.0043	0.65419	1516	16	1440	22	1605	21	1605	21	10.3
13GPI03_12	169.1	0.577	3.722	0.040	0.2745	0.0027	0.56364	1577	8.9	1563	14	1601.6	7.9	1601.6	7.9	2.4
13GPI03_13	157	2.067	2.748	0.025	0.2356	0.0023	0.79382	1343.9	6.7	1363	12	1324.4	9.2	1324.4	9.2	2.9
13GPI03_13	97.8	1.462	3.060	0.043	0.2540	0.0029	0.73157	1424	11	1459	15	1361	11	1361	11	7.2
13GPI03_14	111.5	1.3	3.381	0.032	0.2670	0.0028	0.72928	1500.4	7.3	1525	14	1461.3	8.6	1461.3	8.6	4.4
13GPI03_17	56.6	0.966	2.852	0.030	0.2454	0.0020	0.331	1368.6	8	1415	11	1311	12	1311	12	7.9
13GPI03_19	68	1.26	1.995	0.023	0.1932	0.0016	0.40825	1113.2	7.7	1138.8	8.6	1059	13	1138.8	8.6	2.3
13GPI03_20	601	1.69	0.179	0.002	0.0260	0.0002	0.36724	167.4	1.8	165.7	1.2	191	15	165.7	1.2	1.0
13GPI03_22	90.5	0.797	4.824	0.045	0.3229	0.0031	0.72346	1788.7	7.9	1804	15	1767.2	6.8	1767.2	6.8	2.1
13GPI03_23	104.1	1.685	2.071	0.017	0.1935	0.0014	0.41844	1138.9	5.7	1140.5	7.3	1145	10	1140.5	7.3	0.1
13GPI03_24	71.3	0.791	0.854	0.011	0.1044	0.0011	0.2283	627.5	6.1	640	6.5	593	16	640	6.5	2.0
13GPI03_25	305	1.255	4.289	0.094	0.2989	0.0060	0.98738	1689	20	1685	31	1701	7.4	1701	7.4	0.9
13GPI03_26	34.5	0.5993	2.003	0.030	0.1784	0.0021	0.61836	1117	10	1058	12	1213	13	1058	12	5.3
13GPI03_29	122.7	0.713	3.210	0.055	0.2447	0.0021	0.26134	1460	13	1414	10	1553	28	1553	28	9.0
13GPI03_31	192	2.007	4.762	0.035	0.3230	0.0026	0.87162	1778	6.3	1804	13	1755	5.3	1755	5.3	2.8
13GPI03_32	58.6	0.9799	1.542	0.020	0.1515	0.0016	0.79167	946.9	7.9	909.5	9.2	1029	15	909.5	9.2	3.9
13GPI03_33	68.6	0.905	3.934	0.048	0.2901	0.0033	0.79181	1622	10	1642	16	1597.4	9.8	1597.4	9.8	2.8
13GPI03_35	121	1.545	1.846	0.025	0.1835	0.0022	0.76874	1061.3	8.9	1086	12	1011	13	1086	12	2.3
13GPI03_36	70.7	0.996	3.341	0.030	0.2678	0.0026	0.63421	1490.3	7	1529	13	1444.4	9.7	1444.4	9.7	5.9
13GPI03_37	363	6.15	4.954	0.043	0.3307	0.0034	0.92024	1812.4	7.7	1841	17	1780.6	4	1780.6	4	3.4

13GPI03_38	110.3	0.743	4.599	0.034	0.3078	0.0027	0.5988	1748.7	6.2	1730	13	1776.6	7.1	1776.6	7.1	2.6
13GPI03_39	82.1	0.58	4.867	0.041	0.3309	0.0026	0.62275	1797.1	6.9	1843	13	1755.2	7.2	1755.2	7.2	5.0
13GPI03_40	57.8	1.387	3.471	0.029	0.2730	0.0027	0.35191	1520.2	6.5	1556	14	1483	12	1483	12	4.9
13GPI03_41	238.5	0.8447	0.743	0.008	0.0935	0.0009	0.55669	564.1	4.6	576	5.2	530	13	576	5.2	2.1
13GPI03_43	119.2	0.9118	1.849	0.013	0.1748	0.0014	0.24711	1062.8	4.8	1038.5	7.9	1115	13	1038.5	7.9	2.3
13GPI03_44	70.6	1.179	1.879	0.024	0.1810	0.0019	0.52107	1073.2	8.4	1072	10	1088	15	1072	10	0.1
13GPI03_45	72	0.883	3.000	0.029	0.2497	0.0023	0.55218	1407.2	7.4	1437	12	1373	11	1373	11	4.7
13GPI03_46	66.5	1.494	2.009	0.023	0.1960	0.0022	0.42329	1117.9	7.9	1154	12	1060	13	1154	12	3.2
13GPI03_48	366	1.608	0.490	0.005	0.0654	0.0006	0.57931	405.5	3.4	408.3	3.6	390	13	408.3	3.6	0.7
13GPI03_49	61.5	1.379	1.914	0.026	0.1870	0.0022	0.66355	1086.8	8.7	1105	12	1063	15	1105	12	1.7
13GPI03_50	46.7	0.547	3.272	0.033	0.2662	0.0025	0.38788	1476	7.8	1521	13	1426	12	1426	12	6.7
13GPI03_51	93.2	2.27	2.902	0.036	0.2443	0.0025	0.84293	1381.7	9.4	1409	13	1330	11	1330	11	5.9
13GPI03_53	484	19.4	1.886	0.018	0.1801	0.0018	0.76222	1076	6.3	1067.6	9.6	1114.6	9.8	1067.6	9.6	0.8
13GPI03_54	74	1.56	3.328	0.052	0.2708	0.0043	0.51761	1486	12	1544	22	1413	13	1413	13	9.3
13GPI03_55	119.8	0.6258	2.049	0.020	0.1958	0.0015	0.61573	1132.7	6.7	1152.4	8.1	1103.6	9.9	1152.4	8.1	1.7
13GPI03_57	113.1	1.467	5.091	0.035	0.3399	0.0027	0.68006	1834.3	5.8	1886	13	1783.7	6.1	1783.7	6.1	5.7
13GPI03_58	448	1.973	2.319	0.021	0.2141	0.0018	0.86924	1217.9	6.5	1250.4	9.5	1170	5.4	1170	9.5	2.7
13GPI03_60	76.6	0.925	5.067	0.041	0.3377	0.0026	0.47623	1830.2	7	1875	13	1775.8	8.1	1775.8	8.1	5.6
13GPI03_61	26	1.621	1.593	0.033	0.1532	0.0027	0.58094	966	13	919	15	1062	21	919	15	4.9
13GPI03_63	91.1	1.394	11.008	0.082	0.4907	0.0041	0.72711	2523.4	7	2573	18	2481	7.1	2481	7.1	3.7
13GPI03_64	104.3	0.956	2.076	0.019	0.1987	0.0014	0.4261	1140.5	6.2	1168.4	7.7	1094	10	1168.4	7.7	2.4
13GPI03_65	78.4	0.64	2.501	0.026	0.2079	0.0020	0.71736	1271.8	7.4	1219	11	1364.3	6.9	1364.3	6.9	10.7
13GPI03_66	280	1.762	2.020	0.012	0.1939	0.0013	0.65737	1122.1	4.1	1142.3	7	1086.6	6.6	1142.3	7	1.8
13GPI03_67	184.2	4.03	3.155	0.038	0.2507	0.0028	0.86311	1445.4	9.5	1442	14	1453.9	9.9	1453.9	9.9	0.8
13GPI03_68	581	2.447	0.797	0.008	0.0972	0.0011	0.68841	594.8	4.7	597.8	6.6	587	11	597.8	6.6	0.5
13GPI03_69	221	1.462	4.727	0.025	0.3255	0.0020	0.52531	1771.9	4.5	1817	10	1722.8	4.9	1722.8	4.9	5.5
13GPI03_71	72.4	1.307	1.750	0.019	0.1740	0.0016	0.34399	1028.5	6.8	1035	8.7	1015	15	1035	8.7	0.6
13GPI03_73	133.8	0.696	3.080	0.026	0.2545	0.0022	0.70325	1427.4	6.6	1463	12	1382.1	7.8	1382.1	7.8	5.9
13GPI03_75	328	2.86	11.780	0.110	0.4948	0.0035	0.75896	2587.5	8.9	2591	15	2590.6	9.7	2590.6	9.7	0.0
13GPI03_76	156	2.35	2.806	0.026	0.2365	0.0022	0.62998	1357.7	7	1368	11	1340.6	7.9	1340.6	7.9	2.0

13GPI03_77	38.8	1.119	6.044	0.079	0.3292	0.0040	0.59058	1985	11	1834	20	2111.2	8.9	2111.2	8.9	13.1
13GPI03_79	157	0.6973	2.534	0.022	0.2277	0.0018	0.59188	1282.3	6.3	1322.3	9.3	1220.4	7.9	1220.4	7.9	8.3
13GPI03_80	47.2	0.877	1.752	0.025	0.1625	0.0015	0.53843	1028.4	9.1	970.4	8.6	1141	15	970.4	8.6	5.6
13GPI03_82	145.8	1.209	3.231	0.029	0.2581	0.0022	0.70398	1465.4	7.1	1480	11	1432.7	7.8	1432.7	7.8	3.3
13GPI03_83	186.9	0.84	4.086	0.069	0.2880	0.0037	0.90637	1651	14	1631	19	1667.6	7.9	1667.6	7.9	2.2
13GPI03_85	130	1.66	1.930	0.018	0.1889	0.0017	0.5403	1092.3	6.4	1115.4	9.1	1044	11	1115.4	9.1	2.1
13GPI03_86	302	0.901	2.850	0.021	0.2420	0.0016	0.60063	1369.1	5.6	1397	8.5	1327.9	7	1327.9	7	5.2
13GPI03_87	52.3	0.54	16.810	0.150	0.6044	0.0058	0.57623	2926.7	9.1	3047	23	2833.8	8.3	2833.8	8.3	7.5
13GPI03_88	112	1.06	13.620	0.180	0.4994	0.0069	0.98284	2716	18	2610	30	2803.4	7.2	2803.4	7.2	6.9
13GPI03_89	162	1.247	2.954	0.025	0.2448	0.0019	0.39141	1395.5	6.4	1411.4	9.9	1370.4	9.7	1370.4	9.7	3.0
13GPI03_90	190.6	0.8131	1.895	0.015	0.1892	0.0014	0.4757	1080.7	5.7	1116.8	7.6	1016	10	1116.8	7.6	3.3
13GPI03_91	111.6	1.519	3.229	0.023	0.2590	0.0020	0.33022	1464	5.5	1484	10	1439.5	9.8	1439.5	9.8	3.1
13GPI03_92	74.4	1.395	2.072	0.024	0.1985	0.0018	0.6438	1139.2	7.9	1167.3	9.9	1083	12	1167.3	9.9	2.5
13GPI03_93	132.4	2.902	2.049	0.014	0.1959	0.0017	0.50974	1131.6	4.7	1152.9	9	1092.2	9.9	1152.9	9	1.9
13GPI03_95	163	1.037	3.482	0.023	0.2718	0.0020	0.5036	1522.9	5.2	1550	10	1476.6	6.8	1476.6	6.8	5.0
13GPI03_96	115.4	0.7301	0.536	0.007	0.0705	0.0007	0.051841	436.2	4.5	439.4	4	430	19	439.4	4	0.7
13GPI03_97	6.01	0.4136	1.734	0.056	0.1556	0.0034	0.075373	1017	21	932	19	1180	45	932	19	8.4
13GPI03_100	76	1.573	1.989	0.022	0.1923	0.0018	0.27538	1112.3	7.5	1133.9	9.7	1076	14	1133.9	9.7	1.9
13GPI03_101	162.4	1.905	1.733	0.014	0.1720	0.0014	0.37145	1020.7	5.3	1023.2	7.7	1014	12	1023.2	7.7	0.2
13GPI03_102	41.2	0.765	1.975	0.026	0.1937	0.0022	0.32661	1107.6	8.7	1141	12	1052	13	1141	12	3.0
13GPI03_103	196.4	0.6949	2.070	0.014	0.1991	0.0015	0.39649	1138.7	4.7	1170.5	8	1083.9	9.1	1170.5	8	2.8
13GPI03_104	119	0.703	3.388	0.027	0.2685	0.0021	0.44582	1502.1	6.1	1535	11	1455.3	7.3	1455.3	7.3	5.5
13GPI03_105	207	0.998	1.247	0.018	0.1361	0.0023	0.89668	821.5	8.1	822	13	822	13	822	13	0.1
13GPI03_106	259	1.251	2.313	0.022	0.2108	0.0016	0.86441	1215.8	6.9	1232.7	8.4	1196.3	7.6	1196.3	8.4	1.4
13GPI03_107	367	1.619	1.649	0.029	0.1611	0.0026	0.91762	991	10	962	14	1059.2	7.3	962	14	2.9
13GPI03_108	248	14.91	2.671	0.023	0.2335	0.0021	0.7076	1320.8	6.4	1353	11	1266.9	7.4	1266.9	7.4	6.8
13GPI03_109	233	1.1609	2.075	0.015	0.1988	0.0015	0.59136	1140.4	4.9	1168.5	7.9	1087.9	6.3	1168.5	7.9	2.5
13GPI03_110	80.9	1.631	2.197	0.024	0.2043	0.0019	0.16099	1179.5	7.6	1198	10	1141	16	1198	10	1.6
13GPI03_112	218.8	2.554	1.991	0.013	0.1889	0.0014	0.42016	1112.2	4.5	1115.1	7.4	1098.4	9.5	1115.1	7.4	0.3
13GPI03_113	44.8	1.017	0.443	0.009	0.0578	0.0009	0.1799	371.7	6.5	362.4	5.2	430	29	362.4	5.2	2.5

13GPI03_116	75.7	0.71	4.220	0.032	0.3024	0.0026	0.43124	1677.5	6.2	1703	13	1638	10	1638	10	4.0
13GPI03_117	280	1.939	4.618	0.035	0.3138	0.0024	0.79792	1753.2	6.2	1759	12	1739.7	6.4	1739.7	6.4	1.1
13GPI03_118	92.3	0.802	4.179	0.041	0.2746	0.0026	0.65463	1670.4	8.2	1564	13	1783.7	8.7	1783.7	8.7	12.3
13GPI03_120	150	2.435	1.845	0.016	0.1825	0.0016	0.19768	1061.2	5.6	1080.7	8.9	1027	12	1080.7	8.9	1.8
13GPI03_121	136.1	0.67	0.511	0.006	0.0677	0.0006	0.16277	418.9	4.1	422.3	3.8	420	16	422.3	3.8	0.8
13GPI04_1	16.22	0.986	1.780	0.045	0.1625	0.0029	0.3833	1036	17	970	16	1137	31	970	16	6.4
13GPI04_2	258	0.861	5.203	0.049	0.3449	0.0033	0.82051	1853.6	7.9	1910	16	1785.5	5.9	1785.5	5.9	7.0
13GPI04_4	142	4.11	1.957	0.026	0.1892	0.0022	0.60145	1100.1	8.9	1117	12	1073	15	1117	12	1.5
13GPI04_8	161.7	1.346	12.639	0.074	0.5266	0.0042	0.57946	2654.4	5.7	2727	18	2601.3	6.8	2601.3	6.8	4.8
13GPI04_9	35.9	1.669	2.193	0.031	0.1918	0.0023	0.47009	1178	10	1131	13	1231	16	1131	13	4.0
13GPI04_11	94.8	2.068	2.046	0.021	0.1945	0.0021	0.38139	1130.6	6.9	1148	11	1104	10	1148	11	1.5
13GPI04_12	42.66	1.276	4.010	0.043	0.2722	0.0024	0.014872	1635.5	8.8	1552	12	1728	12	1728	12	10.2
13GPI04_13	63.7	1.622	1.418	0.019	0.1375	0.0010	0.15373	896.1	7.8	830.7	5.5	1030	17	830.7	5.5	7.3
13GPI04_14	108.9	1.53	2.016	0.028	0.1922	0.0025	0.73579	1121.4	9.6	1133	14	1106	14	1133	14	1.0
13GPI04_15	104.6	24.6	0.670	0.028	0.0801	0.0024	0.78395	519	17	497	14	593	25	497	14	4.2
13GPI04_16	124.4	1.307	0.962	0.010	0.1145	0.0012	0.34818	684.6	5.2	698.5	7	649	15	698.5	7	2.0
13GPI04_17	203	2.207	2.117	0.014	0.2017	0.0013	0.61596	1154.8	4.7	1184.3	6.8	1098.3	7.4	1184.3	6.8	2.6
13GPI04_18	47.38	0.7641	1.504	0.020	0.1466	0.0016	0.29218	931.3	8.1	881.9	9	1038	19	881.9	9	5.3
13GPI04_19	37.3	0.374	10.560	0.100	0.4038	0.0041	0.73802	2486.7	9.1	2186	19	2724.3	6	2724.3	6	19.8
13GPI04_20	161.2	1.405	3.005	0.022	0.2459	0.0019	0.5511	1409.3	5.6	1417	10	1390.7	6.9	1390.7	6.9	1.9
13GPI04_21	89.2	0.9854	0.495	0.008	0.0623	0.0006	0.25298	408.3	5.1	390.3	3.8	492	25	390.3	3.8	4.4
13GPI04_22	153.7	2.215	5.116	0.041	0.3420	0.0030	0.69724	1838.4	6.8	1896	14	1785.4	6.7	1785.4	6.7	6.2
13GPI04_23	26.21	1.179	0.730	0.020	0.0853	0.0012	0.23178	555	12	527.8	7.3	663	34	527.8	7.3	4.9
13GPI04_24	222.7	2.057	5.351	0.038	0.3547	0.0025	0.69845	1877.6	6.2	1957	12	1793.6	5.9	1793.6	5.9	9.1
13GPI04_25	88.7	1.587	4.277	0.036	0.3001	0.0032	0.55624	1688.5	7	1691	16	1689.7	8	1689.7	8	0.1
13GPI04_28	51.2	1.79	3.200	0.038	0.2613	0.0025	0.21609	1458.7	8.9	1496	13	1410	17	1410	17	6.1
13GPI04_30	54.9	1.343	2.101	0.031	0.1978	0.0024	0.67649	1150	10	1163	13	1122	17	1163	13	1.1
13GPI04_34	122.8	1.007	0.983	0.038	0.0867	0.0039	0.90162	693	20	536	23	1260	22	536	23	22.7

13GPI04_34	54.9	0.684	1.906	0.046	0.1824	0.0037	0.60826	1083	16	1080	20	1089	33	1080	20	0.3
13GPI04_35	334.4	3.046	2.395	0.014	0.2166	0.0014	0.58711	1241	4.1	1263.6	7.7	1211.6	7.1	1211.6	7.1	4.3
13GPI04_36	105	1.076	14.125	0.091	0.5458	0.0038	0.58161	2757.8	6.1	2807	16	2728.8	5.9	2728.8	5.9	2.9
13GPI04_37	80.7	0.7974	3.293	0.052	0.2281	0.0033	0.61036	1479	12	1324	17	1717	16	1717	16	22.9
13GPI04_38	66.4	1.158	2.954	0.035	0.2488	0.0024	0.72456	1395.3	8.9	1434	13	1360	11	1360	11	5.4
13GPI04_39	67.7	1.825	3.380	0.040	0.2723	0.0027	0.56892	1500.2	9.4	1552	14	1436	11	1436	11	8.1
13GPI04_40	7.07	0.718	1.619	0.069	0.1653	0.0061	0.28966	974	27	985	34	963	72	985	34	1.1
13GPI04_41	80.8	0.7638	3.207	0.069	0.2583	0.0038	0.68182	1457	17	1481	19	1436	18	1436	18	3.1
13GPI04_42	76.7	2.29	1.961	0.030	0.1875	0.0023	0.59332	1102.7	9.9	1108	13	1093	18	1108	13	0.5
13GPI04_43	239	3.1	5.182	0.052	0.3440	0.0034	0.60201	1849	8.5	1905	16	1784.8	6.9	1784.8	6.9	6.7
13GPI04_44	97	1.725	2.109	0.023	0.2016	0.0019	0.54707	1151.4	7.5	1184	10	1099	11	1184	10	2.8
13GPI04_45	237	3.845	1.856	0.013	0.1815	0.0012	0.44401	1065.3	4.5	1075.3	6.6	1059.2	8.9	1075.3	6.6	0.9
13GPI04_46	58.8	2.99	2.220	0.043	0.2118	0.0032	0.60428	1186	13	1238	17	1092	15	1092	17	4.4
13GPI04_47	191.2	3.37	0.984	0.021	0.1162	0.0016	0.67244	695	11	708.4	9.3	680	19	708.4	9.3	1.9
13GPI04_47	69.5	0.679	1.325	0.029	0.1427	0.0031	0.45135	856	13	860	18	863	25	860	18	0.5
13GPI04_49	39.22	1.91	1.673	0.026	0.1564	0.0016	0.38983	998	10	936.4	8.8	1127	16	936.4	8.8	6.2
13GPI04_50	38.4	0.519	5.625	0.076	0.3560	0.0057	0.63716	1919	12	1963	27	1876	16	1876	16	4.6
13GPI04_51	51.2	0.2893	7.329	0.064	0.4152	0.0039	0.12121	2151.8	7.7	2238	18	2073	10	2073	10	8.0
13GPI04_52	69.8	1.638	1.961	0.025	0.1883	0.0017	0.36858	1102.8	8.3	1111.9	9.4	1083	14	1111.9	9.4	0.8
13GPI04_53	172	0.615	1.584	0.046	0.1458	0.0048	0.8609	963	18	877	27	1180	18	877	27	8.9
13GPI04_53	59.6	0.6179	1.982	0.034	0.1920	0.0037	0.6592	1109	12	1132	20	1081	17	1132	20	2.1
13GPI04_54	147.6	1.232	3.162	0.049	0.2463	0.0033	0.69048	1451	11	1419	17	1503	8.7	1503	8.7	5.6
13GPI04_54	105.8	1.445	3.589	0.046	0.2800	0.0027	0.32357	1547	10	1591	14	1502	21	1502	21	5.9
13GPI04_55	115	1.465	2.018	0.022	0.1940	0.0021	0.73462	1121.2	7.4	1143	11	1086	12	1143	11	1.9
13GPI04_56	33.22	0.532	3.227	0.068	0.2287	0.0050	0.78069	1466	16	1327	26	1657	16	1657	16	19.9
13GPI04_57	70.6	1.348	4.828	0.043	0.3344	0.0030	0.5583	1789.3	7.5	1861	14	1722.6	8.4	1722.6	8.4	8.0
13GPI04_58	59.4	1.463	2.669	0.031	0.2162	0.0027	0.61541	1319.1	8.7	1262	14	1414	12	1414	12	10.7
13GPI04_59	224	1.491	1.995	0.015	0.1913	0.0016	0.62725	1113.6	5.1	1128.2	8.8	1096.7	7.8	1128.2	8.8	1.3
13GPI04_60	286	0.886	4.681	0.031	0.3157	0.0027	0.49643	1764.3	5.7	1770	13	1758	11	1758	11	0.7
13GPI04_61	85.6	2.394	4.371	0.049	0.3050	0.0033	0.70428	1706	9.2	1716	16	1692.2	8.8	1692.2	8.8	1.4

13GPI04_64	153	1.537	2.000	0.016	0.1923	0.0014	0.37998	1115.3	5.4	1133.8	7.7	1084	10	1133.8	7.7	1.7
13GPI04_65	141.7	2.119	2.002	0.017	0.1912	0.0016	0.48304	1115.9	5.8	1127.5	8.5	1078	10	1127.5	8.5	1.0
13GPI04_66	107.2	1.165	2.052	0.018	0.1934	0.0016	0.29036	1132.7	6	1139.8	8.8	1115	11	1139.8	8.8	0.6
13GPI04_67	227	2.182	2.036	0.013	0.1932	0.0011	0.072728	1127.5	4.3	1138.7	6.1	1106.4	9.9	1138.7	6.1	1.0
13GPI04_68	284	2.04	1.804	0.035	0.1717	0.0033	0.89486	1046	13	1021	18	1112.1	9.8	1021	18	2.4
13GPI04_68	111.6	1.441	2.266	0.031	0.2175	0.0023	0.48379	1201.4	9.6	1268	12	1086	16	1086	12	5.5
13GPI04_69	80.9	1.229	2.105	0.025	0.1980	0.0020	0.44076	1150.9	8.1	1164	11	1129	11	1164	11	1.1
13GPI04_72	423	2.94	1.740	0.016	0.1642	0.0019	0.69201	1023	5.8	980	11	1113	15	980	11	4.2
13GPI04_73	73	0.7	3.649	0.050	0.2497	0.0026	0.57434	1561	10	1437	13	1716	12	1716	12	16.3
13GPI04_74	107.4	0.741	2.051	0.023	0.1952	0.0019	0.36721	1133	7.9	1149	10	1091	13	1149	10	1.4
13GPI04_75	181	2.07	2.381	0.018	0.2185	0.0016	0.5077	1237.4	5.1	1274	8.2	1173.4	8.4	1173.4	8.2	3.0
13GPI04_76	67.9	1.859	1.484	0.019	0.1472	0.0015	0.23275	923.1	7.9	885.3	8.6	1014	17	885.3	8.6	4.1
13GPI04_77	77.8	1.769	1.543	0.015	0.1435	0.0013	0.38053	947.4	6.1	864.4	7.4	1113	13	864.4	7.4	8.8
13GPI04_79	47	1.45	1.939	0.031	0.1891	0.0021	0.25084	1095	11	1117	11	1070	19	1117	11	2.0
13GPI04_80	191	1.548	5.147	0.044	0.3379	0.0025	0.68105	1843.4	7.3	1876	12	1812.2	9.2	1812.2	9.2	3.5
13GPI04_81	213	1.688	1.993	0.017	0.1952	0.0020	0.56343	1114.8	5.9	1149	11	1032	12	1149	11	3.1
13GPI04_82	49.9	1.388	2.564	0.032	0.2092	0.0024	0.63442	1289.8	9.2	1224	13	1374.8	9.7	1374.8	9.7	11.0
13GPI04_83	81.6	1.354	4.304	0.037	0.3078	0.0024	0.48891	1693.7	7	1730	12	1652.8	9.7	1652.8	9.7	4.7
13GPI04_84	49.4	0.865	1.545	0.021	0.1497	0.0016	0.11202	948	8.4	899.2	9.2	1034	24	899.2	9.2	5.1
13GPI04_86	478	3.41	1.977	0.052	0.1861	0.0035	0.86723	1106	18	1100	19	1131	22	1100	19	0.5
13GPI04_87	147	0.949	0.536	0.007	0.0696	0.0007	0.29319	436.7	4.5	433.4	3.9	450	16	433.4	3.9	0.8
13GPI04_88	516	2.4	7.050	0.230	0.3237	0.0090	0.89663	2116	29	1807	44	2450	14	2450	14	26.2
13GPI04_88	100.8	0.709	13.150	0.140	0.5303	0.0071	0.64312	2690	10	2742	30	2653	13	2653	13	3.4
13GPI04_90	339	1.889	4.933	0.072	0.3272	0.0045	0.96449	1806	13	1828	20	1787.2	4.7	1787.2	4.7	2.3
13GPI04_91	323	2	0.346	0.005	0.0480	0.0005	0.32713	301.2	4.1	301.9	3.3	304	20	301.9	3.3	0.2
13GPI04_92	67.3	0.802	1.671	0.023	0.1577	0.0016	0.66899	999.4	8.1	944	9	1087	13	944	9	5.5
13GPI04_97	124	2.82	2.014	0.018	0.1927	0.0017	0.49974	1119.8	6	1136.1	9.3	1086	11	1136.1	9.3	1.5
13GPI04_98	215.2	2.064	4.522	0.030	0.3108	0.0028	0.68936	1735.5	5.6	1744	14	1720.4	7.7	1720.4	7.7	1.4
13GPI04_99	30.6	1.764	4.062	0.059	0.2741	0.0042	0.60988	1647	12	1561	21	1718	15	1718	15	9.1
13GPI04_100	76.7	1.281	2.603	0.031	0.2094	0.0025	0.26467	1300.9	8.5	1225	13	1385	13	1385	13	11.6

13GPI04_101	143	1.435	2.907	0.024	0.2405	0.0020	0.52396	1383.3	6.3	1389	10	1370.8	8.3	1370.8	8.3	1.3
13GPI04_102	45.6	0.5475	1.678	0.024	0.1597	0.0019	0.42464	999.5	9	957	10	1087	13	957	10	4.3
13GPI04_103	164	2.34	1.911	0.031	0.1874	0.0025	0.73085	1084	11	1107	14	1039	12	1107	14	2.1
13GPI04_104	45.3	1	4.326	0.051	0.3093	0.0030	0.38631	1697.5	9.7	1737	15	1649	12	1649	12	5.3
13GPI04_105	125.4	0.9316	4.446	0.037	0.3122	0.0026	0.70835	1720.5	6.9	1751	13	1677.8	7	1677.8	7	4.4
13GPI04_106	185.2	1.552	3.229	0.024	0.2590	0.0019	0.48499	1463.7	5.8	1484.5	9.5	1423.7	9.2	1423.7	9.2	4.3
13GPI04_107	81.3	1.911	1.797	0.018	0.1609	0.0019	0.49042	1044	6.4	961	10	1190	13	961	10	8.0
13GPI04_108	62.5	1.789	1.680	0.022	0.1586	0.0020	0.32946	1000.4	8.2	949	11	1089	18	949	11	5.1
13GPI04_109	108.1	1.325	1.818	0.020	0.1805	0.0018	0.41706	1051.4	7.2	1069.5	9.9	1000	10	1069.5	9.9	1.7
13GPI04_112	171	0.9239	5.040	0.037	0.3364	0.0025	0.60492	1825.8	6.2	1869	12	1768.9	6.5	1768.9	6.5	5.7
13GPI04_114	184	0.782	4.781	0.034	0.3260	0.0023	0.47149	1782	5.8	1819	11	1749.4	7	1749.4	7	4.0
13GPI04_115	96.5	1.281	1.885	0.023	0.1860	0.0023	0.62095	1076.6	8.2	1099	13	1047	11	1099	13	2.1
13GPI04_116	34.3	1.877	1.616	0.029	0.1510	0.0027	0.61788	975	11	906	15	1099	17	906	15	7.1
13GPI04_117	218	1.511	0.769	0.009	0.0935	0.0009	0.21345	579.5	4.9	576.1	5.1	590	17	576.1	5.1	0.6
13GPI04_118	63.4	1.462	1.623	0.018	0.1525	0.0020	0.29004	978.8	7.1	915	11	1118	18	915	11	6.5
13GPI04_119	155.6	0.569	1.980	0.017	0.1916	0.0019	0.44219	1108.2	5.9	1130	11	1085	14	1130	11	2.0
13GPI04_120	26.9	0.4093	1.548	0.033	0.1462	0.0022	0.3376	951	12	879	12	1088	27	879	12	7.6
13GPI04_121	321	2.24	4.929	0.031	0.3281	0.0027	0.66344	1807.8	5.5	1829	13	1792.7	7.8	1792.7	7.8	2.0
13GPI05_1	23.5	1.438	1.617	0.027	0.1551	0.0023	0.3399	977	10	929	13	1064	21	929	13	4.9
13GPI05_2	215.5	1.416	0.785	0.009	0.0962	0.0010	0.60409	587.9	5	592.1	5.9	569	12	592.1	5.9	0.7
13GPI05_3	63.8	1.4	6.017	0.057	0.3285	0.0030	0.60957	1977.6	8.2	1831	15	2117.2	9.1	2117.2	9.1	13.5
13GPI05_4	29.2	1.531	1.587	0.028	0.1523	0.0025	0.28073	967	11	914	14	1085	19	914	14	5.5
13GPI05_5	127.1	0.664	5.017	0.078	0.3229	0.0047	0.77758	1821	13	1804	23	1857	11	1857	11	2.9
13GPI05_6	49.08	0.861	1.352	0.021	0.1369	0.0019	0.44887	867.8	9	827	11	946	21	827	11	4.7
13GPI05_7	108.7	1.2	3.540	0.110	0.2582	0.0030	0.89406	1532	23	1480	15	1598	37	1598	37	7.4
13GPI05_8	70.8	2.8	4.426	0.047	0.2809	0.0030	0.5637	1717.8	8.5	1596	15	1851	11	1851	11	13.8
13GPI05_9	62.3	0.891	1.563	0.024	0.1458	0.0021	0.54531	954.8	9.5	877	12	1115	17	877	12	8.1
13GPI05_10	107.1	2.492	4.370	0.044	0.2731	0.0031	0.78412	1707.2	8.5	1558	16	1866.1	8.5	1866.1	8.5	16.5

13GPI05_11	68.7	1.807	3.440	0.037	0.2729	0.0026	0.41614	1514.3	8	1555	13	1457	13	1457	13	6.7
13GPI05_12	130	0.78	4.094	0.037	0.2984	0.0023	0.63471	1652.5	7.3	1683	11	1614.1	7.8	1614.1	7.8	4.3
13GPI05_13	9.86	0.926	1.765	0.039	0.1648	0.0035	0.28162	1033	15	986	19	1142	33	986	19	4.5
13GPI05_14	64.4	0.816	3.760	0.049	0.2558	0.0025	0.61322	1583	10	1468	13	1721	12	1721	12	14.7
13GPI05_15	28.94	1.062	0.858	0.018	0.0946	0.0015	0.42594	629	10	582.4	8.7	760	29	582.4	8.7	7.4
13GPI05_16	107.4	0.729	2.338	0.018	0.2108	0.0016	0.51998	1224.3	5.5	1233.1	8.4	1216.6	8.7	1216.6	8.7	1.4
13GPI05_17	94.3	1.009	4.095	0.051	0.2952	0.0032	0.60772	1653	10	1667	16	1627	10	1627	10	2.5
13GPI05_18	12.22	0.779	2.566	0.053	0.2082	0.0033	0.37692	1291	15	1221	17	1403	24	1403	24	13.0
13GPI05_19	15.54	0.762	0.861	0.076	0.0508	0.0016	0.26384	621	42	319	10	1970	150	DISC	DISC	83.8
13GPI05_20	11.06	0.907	2.302	0.043	0.1934	0.0034	0.096033	1213	13	1139	18	1331	32	1139	18	6.1
13GPI05_21	31.2	0.996	2.051	0.034	0.2016	0.0026	0.54328	1133	12	1184	14	1053	24	1184	14	4.5
13GPI05_22	128.5	1.358	2.003	0.017	0.1931	0.0015	0.37927	1116.9	5.8	1137.8	8.3	1076.9	8.8	1137.8	8.3	1.9
13GPI05_23	53.5	0.844	3.736	0.042	0.2615	0.0029	0.5369	1579.6	9.2	1497	15	1666	12	1666	12	10.1
13GPI05_24	95.5	1.058	0.597	0.010	0.0729	0.0012	0.62943	475.9	6.1	453.3	7.2	591	15	453.3	7.2	4.7
13GPI05_25	114.1	0.8558	2.490	0.020	0.2200	0.0014	0.27614	1269.5	5.6	1281.9	7.3	1244	10	1244	10	3.0
13GPI05_26	106	1.477	3.185	0.032	0.2569	0.0024	0.90453	1453	7.9	1474	12	1425.9	7.9	1425.9	7.9	3.4
13GPI05_27	32.1	0.7075	1.387	0.026	0.1314	0.0019	0.29798	883	11	796	11	1113	28	796	11	9.9
13GPI05_28	9.09	2.17	1.307	0.083	0.1069	0.0050	0.071539	841	35	654	29	1363	97	654	29	22.2
13GPI05_29	77.3	1.401	0.523	0.010	0.0645	0.0007	0.1961	426.8	6.4	402.9	4.5	518	28	402.9	4.5	5.6
13GPI05_30	75.4	1.602	1.543	0.020	0.1463	0.0017	0.51367	947.3	7.9	880	9.8	1078	13	880	9.8	7.1
13GPI05_31	54.1	1.247	1.499	0.026	0.1399	0.0025	0.68676	929	10	844	14	1135	19	844	14	9.1
13GPI05_32	19.14	1.485	3.279	0.051	0.2309	0.0035	0.5137	1478	12	1339	18	1662	18	1662	18	19.4
13GPI05_33	112.8	1.341	0.890	0.012	0.1062	0.0011	0.30054	645.8	6.6	651.6	6.2	621	17	651.6	6.2	0.9
13GPI05_34	71.9	2.044	1.488	0.022	0.1446	0.0015	0.37987	925.8	8.8	870.7	8.4	1024	15	870.7	8.4	6.0
13GPI05_35	62.1	0.891	1.557	0.028	0.1474	0.0019	0.40062	952	11	886	11	1066	15	886	11	6.9
13GPI05_36	176.4	0.981	0.857	0.011	0.1028	0.0012	0.53129	628.3	6.2	630.8	6.9	623	15	630.8	6.9	0.4
13GPI05_37	17.04	0.916	6.321	0.082	0.3414	0.0046	0.43878	2020	11	1893	22	2136	14	2136	14	11.4
13GPI05_38	190.3	1.423	3.178	0.066	0.2532	0.0040	0.69341	1453	16	1455	21	1440	16	1440	16	1.0
13GPI05_38	155.4	1.358	3.765	0.065	0.2849	0.0056	0.7154	1585	14	1615	28	1542	12	1542	12	4.7
13GPI05_40	50.2	0.6215	1.551	0.027	0.1496	0.0023	0.51129	953	11	898	13	1042	20	898	13	5.8

13GPI05_41	73.9	0.987	1.693	0.024	0.1597	0.0019	0.49443	1005.3	9.2	955	11	1087	17	955	11	5.0
13GPI05_42	141.4	0.963	4.334	0.035	0.2953	0.0026	0.65301	1699.5	6.7	1668	13	1730.8	7.2	1730.8	7.2	3.6
13GPI05_43	72.43	1.548	1.592	0.019	0.1529	0.0014	0.33832	966.8	7.3	917.2	8	1047	12	917.2	8	5.1
13GPI05_44	66.9	1.47	0.239	0.006	0.0324	0.0005	0.013391	217.6	5	205.4	3	253	37	205.4	3	5.6
13GPI05_45	95.8	0.878	4.585	0.058	0.3188	0.0041	0.71394	1746	10	1784	20	1706.2	9.2	1706.2	9.2	4.6
13GPI05_46	81.1	1.133	1.783	0.021	0.1653	0.0021	0.6042	1038.8	7.7	986	12	1133	13	986	12	5.1
13GPI05_47	41.4	0.859	1.527	0.028	0.1462	0.0019	0.60866	943	11	880	11	1049	17	880	11	6.7
13GPI05_48	94.2	1.72	1.619	0.035	0.1514	0.0028	0.81511	976	13	908	15	1080	14	908	15	7.0
13GPI05_49	322	1.902	2.050	0.018	0.1965	0.0015	0.61907	1132.1	5.9	1156.4	8.2	1076.7	7.9	1156.4	8.2	2.1
13GPI05_50	184.7	1.465	4.982	0.034	0.3401	0.0030	0.67158	1815.9	5.7	1889	14	1729	7	1729	7	9.3
13GPI05_51	141	0.877	0.592	0.009	0.0760	0.0008	0.36644	471.5	5.9	472.4	4.7	450	17	472.4	4.7	0.2
13GPI05_52	33.9	1.384	1.675	0.030	0.1510	0.0020	0.41858	998	12	906	11	1160	23	906	11	9.2
13GPI05_53	131.3	1.104	1.678	0.035	0.1704	0.0028	0.77027	999	13	1014	16	961	16	1014	16	1.5
13GPI05_54	200.9	0.6476	0.655	0.007	0.0831	0.0006	0.16985	511	4.3	514.5	3.7	498	15	514.5	3.7	0.7
13GPI05_55	94.2	1.377	1.809	0.022	0.1674	0.0015	0.51684	1048.2	7.8	997.5	8.4	1118	13	997.5	8.4	4.8
13GPI05_56	91.8	0.6348	1.691	0.022	0.1610	0.0016	0.53878	1004.4	8.2	962.1	9	1070	12	962.1	9	4.2
13GPI05_57	112	2.83	2.047	0.038	0.1904	0.0032	0.81663	1130	13	1123	18	1171	11	1123	18	0.6
13GPI05_58	124.8	10.32	15.170	0.130	0.5674	0.0051	0.75566	2825.3	8.3	2896	21	2765.8	6.1	2765.8	6.1	4.7
13GPI05_59	200.2	0.6932	0.623	0.007	0.0796	0.0008	0.30054	491.9	4.3	493.9	4.9	486	15	493.9	4.9	0.4
13GPI05_60	158.6	0.69	2.887	0.041	0.2177	0.0043	0.18956	1377	11	1269	23	1544	41	1544	41	17.8
13GPI05_61	129.3	1.303	1.777	0.020	0.1754	0.0021	0.55091	1036.5	7.4	1042	12	1018	13	1042	12	0.5
13GPI05_62	26.3	0.987	1.661	0.029	0.1564	0.0029	0.52609	994	11	939	17	1080	22	939	17	5.5
13GPI05_63	82	2.24	4.631	0.052	0.3177	0.0031	0.73229	1755.3	9.6	1778	15	1724.4	9.9	1724.4	9.9	3.1
13GPI05_64	46.6	1.115	2.686	0.038	0.2128	0.0028	0.57821	1325	10	1243	15	1421	12	1421	12	12.5
13GPI05_65	315	0.6721	0.369	0.004	0.0508	0.0004	0.30443	318.6	3.1	319.6	2.6	310	18	319.6	2.6	0.3
13GPI05_67	60	1.242	1.666	0.022	0.1575	0.0014	0.56734	997.5	8.5	943	8	1107	15	943	8	5.5
13GPI05_68	31	1.025	15.390	0.200	0.4805	0.0063	0.88558	2840	13	2528	27	3040.9	6.1	3040.9	6.1	16.9
13GPI05_69	173.4	1.225	1.910	0.042	0.1716	0.0043	0.84759	1084	15	1025	22	1204	15	1025	22	5.4
13GPI05_70	19.29	0.484	8.520	0.150	0.3752	0.0053	0.68901	2286	16	2053	25	2462	15	2462	15	16.6
13GPI05_71	100.7	0.929	25.490	0.200	0.6860	0.0064	0.7705	3326.6	7.5	3367	24	3291.9	4.9	3291.9	4.9	2.3

13GPI05_72	41.1	0.988	0.752	0.013	0.0879	0.0013	0.04342	568.8	7.6	542.9	7.9	670	28	542.9	7.9	4.6
13GPI05_73	294.6	1.239	0.802	0.008	0.0971	0.0008	0.3872	598.7	4.5	597.2	4.9	594	16	597.2	4.9	0.3
13GPI05_74	126	1.255	2.238	0.019	0.2039	0.0019	0.41064	1193.5	6.2	1196.3	9.9	1176	11	1196.3	9.9	0.2
13GPI05_75	31.7	0.637	3.367	0.042	0.2326	0.0030	0.46153	1498	10	1348	16	1713	15	1713	15	21.3
13GPI05_77	92.1	1.703	1.719	0.023	0.1621	0.0016	0.54659	1015.1	8.7	968.4	9.1	1090	13	968.4	9.1	4.6
13GPI05_78	89	2.533	4.005	0.042	0.2567	0.0026	0.63804	1635.6	8.7	1473	13	1804.9	9.3	1804.9	9.3	18.4
13GPI05_79	79.6	1.843	1.619	0.038	0.1595	0.0036	0.81147	976	15	953	20	1032	14	953	20	2.4
13GPI05_80	43.7	0.7946	1.751	0.029	0.1630	0.0023	0.37942	1028	11	973	13	1111	21	973	13	5.4
13GPI05_82	67.2	0.3298	1.704	0.043	0.1529	0.0014	0.09926	1010	16	916.8	7.8	1177	47	916.8	7.8	9.2
13GPI05_83	27.7	0.2698	13.120	0.130	0.4613	0.0051	0.72948	2687.4	9.6	2445	23	2846.8	7.8	2846.8	7.8	14.1
13GPI05_84	57.2	0.494	4.630	0.062	0.3196	0.0036	0.55947	1756	11	1787	17	1713	11	1713	11	4.3
13GPI05_85	165	1.029	4.710	0.042	0.3250	0.0026	0.4446	1768.7	7.4	1814	13	1713	10	1713	10	5.9
13GPI05_86	23	0.4347	3.141	0.064	0.2407	0.0036	0.52276	1445	16	1390	19	1508	19	1508	19	7.8
13GPI05_87	24.66	0.7823	0.700	0.019	0.0808	0.0015	0.085102	541	11	500.9	9.1	645	41	500.9	9.1	7.4
13GPI05_88	87.7	0.664	2.352	0.026	0.2135	0.0025	0.37113	1227.7	8	1248	13	1180	18	1180	13	1.7
13GPI05_89	257.1	0.816	4.440	0.035	0.3069	0.0024	0.75279	1719.5	6.6	1727	12	1701.9	6.2	1701.9	6.2	1.5
13GPI05_91	283	1.835	4.819	0.041	0.3148	0.0030	0.81088	1787.8	7.2	1768	15	1800.6	6.5	1800.6	6.5	1.8
13GPI05_93	329	1.761	3.726	0.029	0.2400	0.0018	0.59524	1576.7	6.3	1386.7	9.6	1807.5	7.2	1807.5	7.2	23.3
13GPI05_94	90.9	0.5127	4.803	0.044	0.2875	0.0029	0.66377	1784.9	7.8	1629	15	1939.4	6.6	1939.4	6.6	16.0
13GPI05_95	89	4	0.758	0.013	0.0922	0.0014	0.087962	572.3	7.3	568.2	8.1	577	26	568.2	8.1	0.7
13GPI05_96	111	2.243	1.851	0.017	0.1837	0.0015	0.56164	1063.4	6	1087	8.1	1019	11	1087	8.1	2.2
13GPI05_97	111.4	2.034	4.428	0.038	0.2871	0.0023	0.67087	1718.1	6.9	1627	12	1806.5	7.4	1806.5	7.4	9.9
13GPI05_98	23.87	1.458	1.468	0.034	0.1368	0.0022	0.47463	917	14	826	12	1105	25	826	12	9.9
13GPI05_99	32.1	0.5408	1.450	0.027	0.1413	0.0019	0.31028	909	11	852	11	1023	22	852	11	6.3
13GPI05_100	45.43	0.866	0.427	0.011	0.0564	0.0011	0.18036	360.7	7.7	353.4	6.8	374	32	353.4	6.8	2.0
13GPI05_101	45.7	0.488	1.500	0.022	0.1480	0.0016	0.1659	929.8	9	889.5	9.3	1007	19	889.5	9.3	4.3
13GPI05_102	132	0.3737	0.205	0.005	0.0281	0.0004	0.069264	189.3	4.6	178.9	2.2	270	31	178.9	2.2	5.5
13GPI05_103	80.4	1.634	2.263	0.032	0.1788	0.0022	0.76025	1201	10	1060	12	1424.3	9.7	1060	12	11.7
13GPI05_104	208	1.066	0.927	0.011	0.1089	0.0012	0.60966	666.6	5.8	666.2	7.1	679	17	666.2	7.1	0.1
13GPI05_106	44.4	1.011	1.669	0.029	0.1591	0.0023	0.45377	996	11	953	13	1072	20	953	13	4.3

13GPI05_107	297.2	2.689	6.293	0.067	0.3069	0.0037	0.7661	2017.1	9.4	1725	18	2337.7	7.6	2337.7	7.6	26.2
13GPI05_108	21.7	0.3414	1.787	0.035	0.1652	0.0024	0.0020924	1039	13	985	13	1142	29	985	13	5.2
13GPI05_109	35.6	1.001	1.579	0.026	0.1479	0.0020	0.27252	962	10	889	12	1119	22	889	12	7.6
13GPI05_110	38.9	0.892	11.340	0.130	0.4330	0.0053	0.74287	2550	11	2318	24	2721.3	9.7	2721.3	9.7	14.8
13GPI05_111	155	2.54	1.951	0.027	0.1906	0.0020	0.13338	1098	9.2	1124	11	1067	16	1124	11	2.4
13GPI05_112	43.6	1.318	2.139	0.054	0.1777	0.0035	0.78059	1161	18	1054	19	1343	17	1054	19	9.2
13GPI05_113	51.3	1.37	7.060	0.140	0.4015	0.0057	0.67994	2119	18	2175	26	2089	19	2089	19	4.1
13GPI05_114	344	0.927	0.456	0.006	0.0589	0.0007	0.31298	381.5	4.2	368.6	4.4	470	24	368.6	4.4	3.4
13GPI05_115	129.4	1.284	0.595	0.013	0.0671	0.0009	0.31352	471.8	7.6	418.7	5.3	751	34	418.7	5.3	11.3
13GPI05_116	55.1	1.409	1.915	0.042	0.1678	0.0022	0.22939	1084	14	1000	12	1254	32	1000	12	7.7
13GPI05_117	143.7	1.08	2.012	0.017	0.1944	0.0019	0.43947	1120.3	5.6	1145	10	1097	13	1145	10	2.2
13GPI05_118	156	1.653	1.861	0.017	0.1856	0.0015	0.44394	1067.8	6.1	1098.5	7.9	1024	12	1098.5	7.9	2.9
13GPI05_119	203.8	1.996	1.822	0.035	0.1760	0.0033	0.87962	1054	12	1045	18	1096	10	1045	18	0.9
13GPI05_120	403.7	5.53	10.105	0.088	0.4374	0.0039	0.89636	2443.8	8.2	2339	17	2544.5	4.5	2544.5	4.5	8.1
13GPI05_121	417	63	0.505	0.016	0.0663	0.0018	0.21641	415	11	414	11	520	120	414	11	0.2
13GPI05_121	267.3	2.083	1.413	0.019	0.1455	0.0018	0.55439	894	7.9	876	10	956	14	876	10	2.0
13GPI06_1	40.9	1	1.945	0.024	0.1863	0.0016	0.66802	1096.3	8.1	1101.3	8.9	1079	15	1101.3	8.9	0.5
13GPI06_2	202	1.688	0.292	0.003	0.0409	0.0003	0.52327	260.7	2.5	258.1	1.9	281	17	258.1	1.9	1.0
13GPI06_3	17.42	0.4717	13.250	0.130	0.5116	0.0043	0.92047	2696.9	9.5	2663	18	2717.5	8.3	2717.5	8.3	2.0
13GPI06_4	68.1	0.873	4.087	0.035	0.2945	0.0027	0.86344	1651.3	7	1664	13	1645.9	8.8	1645.9	8.8	1.1
13GPI06_5	558	4.91	2.479	0.092	0.1701	0.0030	0.99796	1264	27	1012	17	1706	80	1012	17	19.9
13GPI06_5	117.1	1.76	2.725	0.051	0.2214	0.0049	0.93639	1337	14	1289	26	1420	30	1420	30	9.2
13GPI06_6	105.9	0.755	1.657	0.015	0.1654	0.0017	0.81211	992	5.7	986.8	9.3	1011	11	986.8	9.3	0.5
13GPI06_7	77.6	0.878	4.038	0.047	0.2870	0.0028	0.77543	1641.2	9.5	1626	14	1657	13	1657	13	1.9
13GPI06_8	110	0.894	0.937	0.032	0.1031	0.0011	0.81418	669	16	632.4	6.5	763	46	632.4	6.5	5.5
13GPI06_9	273	0.538	0.260	0.005	0.0373	0.0004	0.76946	234.5	3.6	236.3	2.7	212	19	236.3	2.7	0.8
13GPI06_10	43.2	0.5011	3.590	0.033	0.2781	0.0022	0.93127	1547.8	7.2	1581	11	1496	13	1496	13	5.7
13GPI06_11	149	1.959	1.941	0.021	0.1814	0.0019	0.89517	1094.9	7.1	1074	10	1127.7	7.3	1074	10	1.9

13GPI06_12	194.8	1.857	1.827	0.013	0.1780	0.0013	0.48122	1055.5	4.6	1056	6.9	1051.1	7.6	1056	6.9	0.0
13GPI06_13	111.9	1.303	1.692	0.016	0.1673	0.0015	0.73786	1005.3	5.9	999.2	8	1026.7	9.9	999.2	8	0.6
13GPI06_14	75.6	0.8836	1.589	0.015	0.1633	0.0012	0.66599	965.6	6.1	974.8	6.5	946	11	974.8	6.5	1.0
13GPI06_15	25.3	0.645	0.718	0.018	0.0892	0.0013	0.93865	549	10	550.4	8	543	30	550.4	8	0.3
13GPI06_16	80	1.02	0.557	0.061	0.0554	0.0010	0.90522	437	36	347.8	6	850	150	347.8	6	20.4
13GPI06_17	158.7	2.491	1.719	0.016	0.1706	0.0014	0.83577	1016.3	6.3	1015.3	7.6	1022	12	1015.3	7.6	0.1
13GPI06_18	161	1.6	4.762	0.041	0.3194	0.0026	0.85923	1777.7	7.3	1787	13	1764.9	6.2	1764.9	6.2	1.3
13GPI06_19	456	1.1511	4.915	0.027	0.3273	0.0017	0.7593	1804.6	4.7	1825.4	8.5	1772.3	3.7	1772.3	3.7	3.0
13GPI06_20	305	0.98	0.357	0.009	0.0444	0.0006	0.88651	309.9	6.4	280	3.9	534	64	280	3.9	9.6
13GPI06_21	72.2	1.382	3.037	0.023	0.2498	0.0016	0.6226	1416.8	5.8	1438.6	8.2	1387.8	9.3	1387.8	9.3	3.7
13GPI06_22	172.5	1.134	0.184	0.003	0.0269	0.0003	0.95624	171.5	2.5	171	1.9	180	24	171	1.9	0.3
13GPI06_23	105.6	1.317	2.567	0.021	0.2244	0.0019	0.81596	1290.9	5.9	1305.2	9.9	1260	11	1260	11	3.6
13GPI06_24	74.2	1.056	3.721	0.039	0.2742	0.0023	0.79971	1575.3	8.3	1562	12	1592.9	8.1	1592.9	8.1	1.9
13GPI06_25	124.4	0.9802	2.335	0.017	0.2126	0.0016	0.77958	1222.7	5.1	1242.4	8.8	1193.7	9.8	1193.7	8.8	1.6
13GPI06_26	431	1.669	2.018	0.021	0.1909	0.0019	0.90321	1122.1	6.9	1126	10	1107.4	4.6	1126	10	0.3
13GPI06_27	146.9	1.373	3.567	0.063	0.2712	0.0019	0.73054	1541	13	1546.6	9.6	1528	21	1528	21	1.2
13GPI06_28	597	11.55	0.484	0.005	0.0636	0.0008	0.75803	400.9	3.7	397.3	4.6	428	14	397.3	4.6	0.9
13GPI06_29	126.5	0.5815	0.273	0.005	0.0383	0.0003	0.57789	245.3	3.8	242.4	2	261	27	242.4	2	1.2
13GPI06_30	174.3	1.26	1.836	0.014	0.1725	0.0015	0.88334	1058.1	5.2	1025.5	8.5	1132	10	1025.5	8.5	3.1
13GPI06_31	217	1.126	0.120	0.003	0.0176	0.0002	0.68648	114.9	2.4	112.2	1.1	198	31	112.2	1.1	2.3
13GPI06_32	65.4	1.64	4.158	0.056	0.2960	0.0051	0.95075	1665	11	1671	25	1659	19	1659	19	0.7
13GPI06_33	69.3	0.6752	12.450	0.170	0.4960	0.0042	0.91773	2638	13	2596	18	2668	13	2668	13	2.7
13GPI06_34	105	1.586	1.864	0.022	0.1812	0.0025	0.88178	1068	7.9	1073	13	1044	15	1073	13	0.5
13GPI06_35	73	0.986	3.164	0.029	0.2564	0.0022	0.84192	1448.7	7	1471	11	1405	11	1405	11	4.7
13GPI06_36	45.9	0.741	0.838	0.012	0.1009	0.0009	0.6707	617.4	6.9	619.3	5.5	626	15	619.3	5.5	0.3
13GPI06_37	70.9	1.389	0.105	0.004	0.0151	0.0003	0.94334	101.5	3.5	96.3	1.8	279	43	96.3	1.8	5.1
13GPI06_38	213	0.817	0.187	0.005	0.0263	0.0003	0.71306	173.9	4.1	167.1	1.7	278	49	167.1	1.7	3.9
13GPI06_39	179	2.744	1.763	0.014	0.1758	0.0014	0.51879	1031.9	5	1044.2	7.8	1007.4	9.3	1044.2	7.8	1.2
13GPI06_39	215.3	1.864	1.927	0.019	0.1861	0.0019	0.53822	1090.4	6.5	1100	10	1076	14	1100	10	0.9
13GPI06_40	48.4	0.714	2.095	0.020	0.1945	0.0018	0.78379	1146.7	6.7	1145.5	9.8	1145	12	1145.5	9.8	0.1

13GPI06_41	49.1	1.023	5.982	0.054	0.3691	0.0031	0.8907	1972.7	7.8	2029	15	1912	8.5	1912	8.5	6.1
13GPI06_42	26.84	2.122	1.822	0.026	0.1797	0.0022	0.88677	1053.8	9.3	1065	12	1035	18	1065	12	1.1
13GPI06_43	31.5	1.021	1.913	0.029	0.1859	0.0020	0.8816	1087	10	1099	11	1068	16	1099	11	1.1
13GPI06_44	164	1.079	0.564	0.007	0.0717	0.0009	0.85333	454.1	4.6	446.1	5.4	508	20	446.1	5.4	1.8
13GPI06_45	268	0.4124	0.221	0.015	0.0282	0.0003	0.68458	199	11	179.2	1.7	390	100	179.2	1.7	9.9
13GPI06_46	16.41	0.4384	14.880	0.170	0.5631	0.0062	0.97624	2807	11	2879	26	2748	10	2748	10	4.8
13GPI06_47	172	2.16	2.143	0.032	0.2022	0.0021	0.83736	1162	10	1187	11	1125	18	1187	11	2.2
13GPI06_48	42.4	0.3967	0.349	0.010	0.0481	0.0007	0.89102	303.1	7.3	302.8	4.1	312	37	302.8	4.1	0.1
13GPI06_49	200	1.333	0.117	0.003	0.0178	0.0003	0.90058	112.4	2.6	113.6	1.7	156	28	113.6	1.7	1.1
13GPI06_50	32.5	0.8672	1.837	0.026	0.1794	0.0016	0.84309	1057.9	9.4	1063.5	8.5	1041	20	1063.5	8.5	0.5
13GPI06_51	100.6	1.056	0.717	0.008	0.0897	0.0010	0.72624	548.8	4.9	553.5	6	522	19	553.5	6	0.9
13GPI06_52	80.9	0.865	4.693	0.040	0.3157	0.0027	0.74034	1765.6	7.2	1768	13	1753	9.7	1753	9.7	0.9
13GPI06_53	160	1.46	0.282	0.004	0.0397	0.0003	0.57272	252.4	3	250.7	2	279	19	250.7	2	0.7
13GPI06_54	203.4	2.723	1.698	0.010	0.1715	0.0010	0.68893	1007.8	3.8	1020.2	5.5	970.9	6.8	1020.2	5.5	1.2
13GPI06_55	34.3	0.513	3.269	0.054	0.2634	0.0041	0.9548	1474	13	1507	21	1427	17	1427	17	5.6
13GPI06_56	42.4	1.296	4.119	0.035	0.2966	0.0025	0.90712	1657.7	7	1674	12	1634	11	1634	11	2.4
13GPI06_57	26.9	1.763	2.022	0.034	0.1877	0.0020	0.89272	1124	11	1109	11	1148	21	1109	11	1.3
13GPI06_58	34.43	1.079	2.815	0.055	0.2342	0.0038	0.88043	1361	15	1356	20	1359	27	1359	27	0.2
13GPI06_59	58.5	0.6575	0.863	0.012	0.1018	0.0013	0.84749	631.1	6.8	625	7.3	646	21	625	7.3	1.0
13GPI06_60	167.5	2.781	2.251	0.014	0.2083	0.0013	0.57145	1197	4.3	1219.8	6.8	1160.8	8.1	1160.8	6.8	1.9
13GPI06_61	97.6	1.21	0.500	0.007	0.0657	0.0007	0.80978	411.4	4.4	410.4	4.2	412	26	410.4	4.2	0.2
13GPI06_62	49.91	0.6841	0.852	0.012	0.1039	0.0009	0.73126	625.1	6.8	637.2	5.1	598	16	637.2	5.1	1.9
13GPI06_63	21.7	0.735	4.610	0.120	0.3128	0.0070	0.96238	1755	22	1753	34	1753	17	1753	17	0.0
13GPI06_64	95.7	0.776	0.468	0.007	0.0612	0.0006	0.71648	389.3	5.1	382.9	3.4	431	19	382.9	3.4	1.6
13GPI06_65	318	1.92	2.073	0.028	0.1900	0.0025	0.81312	1139.7	9.1	1121	13	1158	16	1121	13	1.6
13GPI06_65	147.6	0.855	2.239	0.072	0.2007	0.0026	0.79073	1191	22	1179	14	1217	46	1179	14	1.0
13GPI06_66	34.3	0.775	1.915	0.035	0.1892	0.0024	0.90064	1087	11	1117	13	1016	20	1117	13	2.8
13GPI06_67	218	3.679	0.534	0.005	0.0698	0.0005	0.65804	434.6	3.3	435.1	3.1	429	17	435.1	3.1	0.1
13GPI06_68	112.7	2.062	1.806	0.021	0.1765	0.0019	0.84657	1047.1	7.6	1048	10	1044	11	1048	10	0.1
13GPI06_69	35.6	83	0.625	0.019	0.0801	0.0013	0.98204	492	12	496.8	7.9	452	36	496.8	7.9	1.0

13GPI06_70	62.6	1.95	1.930	0.022	0.1837	0.0019	0.82373	1093	7.5	1087	10	1097	16	1087	10	0.5
13GPI06_71	86.2	1.303	5.125	0.043	0.3348	0.0028	0.84916	1839.9	7.1	1861	14	1818.7	7.7	1818.7	7.7	2.3
13GPI06_72	148.9	1.921	1.524	0.018	0.1487	0.0023	0.94254	940	7.3	894	13	1059	13	894	13	4.9
13GPI06_73	11.24	1.001	1.909	0.037	0.1799	0.0029	0.94761	1084	13	1066	16	1111	32	1066	16	1.7
13GPI06_74	222.5	1.681	3.293	0.029	0.2595	0.0022	0.78407	1479	6.9	1487	11	1466.6	9.2	1466.6	9.2	1.4
13GPI06_75	128.1	1.1134	2.465	0.019	0.2196	0.0015	0.68493	1261.4	5.5	1279.7	7.8	1230.9	8.9	1230.9	8.9	4.0
13GPI06_76	167	1.094	0.281	0.004	0.0388	0.0004	0.74288	251.2	2.9	245.1	2.7	302	21	245.1	2.7	2.4
13GPI06_77	62.39	1.26	1.764	0.017	0.1724	0.0016	0.74191	1033.7	6.3	1025	8.5	1047	10	1025	8.5	0.8
13GPI06_78	129	2.31	1.847	0.019	0.1766	0.0020	0.8664	1063.8	7.1	1048	11	1096	13	1048	11	1.5
13GPI06_79	162	1.685	2.435	0.017	0.2167	0.0013	0.62101	1252.7	5.2	1264.6	6.7	1231.3	7.6	1231.3	7.6	2.7
13GPI06_80	82.3	1.463	5.777	0.043	0.3569	0.0026	0.86192	1942.6	6.5	1967	12	1914.4	8.2	1914.4	8.2	2.7
13GPI06_81	131.6	1.511	4.974	0.035	0.3269	0.0026	0.90802	1814.6	6	1823	13	1803.1	7	1803.1	7	1.1
13GPI06_82	180.6	1.029	0.307	0.004	0.0428	0.0004	0.60422	272.1	2.8	270.2	2.1	280	21	270.2	2.1	0.7
13GPI06_83	43.8	2.326	2.189	0.021	0.2000	0.0021	0.8527	1177.2	6.7	1177	12	1175	13	1177	12	0.0
13GPI06_84	35.8	0.393	0.788	0.018	0.0938	0.0012	0.87862	589	10	577.9	7.3	625	34	577.9	7.3	1.9
13GPI06_85	66.1	1.184	4.027	0.038	0.2843	0.0033	0.92602	1639.1	7.7	1613	16	1662	13	1662	13	2.9
13GPI06_86	81.04	1.067	0.910	0.011	0.1069	0.0010	0.70929	656.8	6.1	654.9	5.9	671	20	654.9	5.9	0.3
13GPI06_87	36.8	1.143	4.997	0.036	0.3245	0.0027	0.79904	1818.4	6.2	1811	13	1820.4	9.7	1820.4	9.7	0.5
13GPI06_88	107.4	1.447	2.832	0.025	0.2321	0.0024	0.86284	1363.8	6.6	1347	13	1376	12	1376	12	2.1
13GPI06_89	225	108.8	0.621	0.011	0.0802	0.0014	0.65801	490.3	7	497.6	8.2	475	20	497.6	8.2	1.5
13GPI06_89	115	0.91	2.345	0.041	0.2086	0.0032	0.64259	1226	12	1221	17	1233	17	1233	17	1.0
13GPI06_90	145.1	1.84	3.044	0.026	0.2539	0.0020	0.86219	1418.4	6.6	1458	10	1360.5	7.3	1360.5	7.3	7.2
13GPI06_91	20.4	0.61	2.080	0.084	0.1894	0.0038	0.9685	1136	25	1117	21	1166	70	1117	21	1.7
13GPI06_92	37.7	2.344	1.842	0.024	0.1787	0.0020	0.83461	1060	8.7	1060	11	1059	17	1060	11	0.0
13GPI06_93	121	0.821	3.297	0.027	0.2639	0.0024	0.90721	1480	6.4	1509	12	1435.4	7.7	1435.4	7.7	5.1
13GPI06_94	144	1.65	0.744	0.009	0.0940	0.0010	0.76975	564.3	5	579.5	5.6	526	11	579.5	5.6	2.7
13GPI06_95	50.11	0.7312	1.804	0.020	0.1766	0.0018	0.86293	1047.5	7.4	1048	10	1045	15	1048	10	0.0
13GPI06_96	27.3	1.229	2.027	0.035	0.1918	0.0029	0.9181	1123	12	1131	16	1106	17	1131	16	0.7
13GPI06_97	110.9	1.571	1.917	0.018	0.1867	0.0016	0.7235	1087.4	6	1103.6	8.5	1053	10	1103.6	8.5	1.5
13GPI06_98	512	1.084	0.288	0.003	0.0399	0.0003	0.51717	257.1	2.6	252.2	1.8	296	15	252.2	1.8	1.9

13GPI06_99	119.1	0.675	0.623	0.011	0.0789	0.0009	0.79697	491.2	6.7	489.7	5.2	503	26	489.7	5.2	0.3
13GPI06_100	250.1	1.04	15.260	0.120	0.5247	0.0047	0.97339	2831.2	7.5	2719	20	2906.7	4.8	2906.7	4.8	6.5
13GPI06_100	112.2	1.085	16.260	0.210	0.5621	0.0064	0.92639	2892	12	2875	26	2900	14	2900	14	0.9
13GPI06_101	193	1.299	0.524	0.006	0.0686	0.0008	0.72316	427.6	4.1	427.5	4.5	422	16	427.5	4.5	0.0
13GPI06_102	36.7	1.204	1.838	0.025	0.1804	0.0018	0.81389	1058.6	8.8	1069	9.7	1037	15	1069	9.7	1.0
13GPI06_103	247.3	1.004	0.424	0.006	0.0576	0.0006	0.77616	358.4	3.9	361.2	3.4	339	17	361.2	3.4	0.8
13GPI06_104	65.5	0.6935	3.631	0.034	0.2785	0.0030	0.88416	1555.9	7.4	1585	15	1517	13	1517	13	4.5
13GPI06_105	80.9	11.54	5.803	0.057	0.3665	0.0030	0.95055	1948	8.1	2013	14	1865.3	6.9	1865.3	6.9	7.9
13GPI06_106	36.6	1.101	17.430	0.130	0.5943	0.0065	0.97172	2958.3	7.4	3006	26	2926.1	6.5	2926.1	6.5	2.7
13GPI06_107	51.2	0.5935	13.207	0.096	0.5135	0.0039	0.83378	2694.1	6.9	2671	17	2708.7	4.9	2708.7	4.9	1.4
13GPI06_108	100	1.133	1.788	0.019	0.1752	0.0016	0.7799	1040.5	7.1	1040.8	8.5	1038	14	1040.8	8.5	0.0
13GPI06_109	37	0.924	29.990	0.230	0.7217	0.0053	0.96348	3488	7.4	3502	20	3480.6	6.2	3480.6	6.2	0.6
13GPI06_110	204.5	4.08	2.634	0.033	0.2297	0.0031	0.81537	1309.9	9.1	1333	17	1280	11	1280	11	4.1
13GPI06_111	166	0.7185	0.549	0.006	0.0717	0.0006	0.62106	444.2	4.1	446.1	3.6	440	21	446.1	3.6	0.4
13GPI06_112	93.9	0.904	1.829	0.018	0.1806	0.0013	0.79846	1055.4	6.4	1070	6.9	1031	12	1070	6.9	1.4
13GPI06_113	431	2.751	1.982	0.014	0.1920	0.0015	0.82855	1109.4	4.7	1132.2	8	1065.5	5.5	1132.2	8	2.1
13GPI06_114	69.7	0.5099	1.993	0.016	0.1915	0.0016	0.80814	1113.5	5.7	1129.2	8.5	1079	11	1129.2	8.5	1.4
13GPI06_115	298	1.179	2.225	0.074	0.1583	0.0017	0.99187	1184	23	947.1	9.5	1636	47	947.1	9.5	20.0
13GPI06_116	87.5	1.568	1.738	0.018	0.1730	0.0016	0.76718	1022.2	6.8	1028.3	8.6	1012	10	1028.3	8.6	0.6
13GPI06_117	88.5	1.324	1.751	0.019	0.1743	0.0014	0.6171	1027	6.9	1035.7	7.5	1005	11	1035.7	7.5	0.8
13GPI06_118	278	2.11	3.197	0.017	0.2615	0.0014	0.76443	1456.4	4.2	1497.5	7.2	1394.1	5.7	1394.1	5.7	7.4
13GPI06_119	271	2.155	1.775	0.013	0.1739	0.0015	0.73679	1036	4.9	1033.4	8	1042.4	7	1033.4	8	0.3
13GPI06_120	169.1	1.187	0.416	0.007	0.0557	0.0006	0.7734	352.9	5.3	349.6	3.9	368	23	349.6	3.9	0.9
13GPI06_121	115.8	2.174	1.724	0.016	0.1699	0.0016	0.70475	1017.9	6	1011.2	8.9	1027	13	1011.2	8.9	0.7
13GPI06_122	194.7	2.585	1.687	0.014	0.1682	0.0013	0.72222	1004.8	5	1002.1	7.1	1005.2	7.8	1002.1	7.1	0.3

Table 2a: Indianola Group: Sixmile Canyon

Sample Name:								207/235		206/238		206/207		Best age		
Grain #	[U] ppm	U/Th	207/235	2σ error	206/238	2σ error	RHO	Age Ma	2σ error	Age (Ma)	2σ error	Age (Ma)	2σ error	(Ma)	2σ error	% Discordance*
13SMPR_1	0.9	0.063	1.957	0.032	0.1883	0.0022	0.33247	1112	12	1100	11	1082	20	1100	11	1.1
13SMPR_2	1.5	0.06	2.732	0.038	0.2168	0.0029	0.55205	1265	15	1337	10	1452	10	1452	10	7.9
13SMPR_2	0.77	0.061	3.300	0.060	0.2618	0.0041	0.42861	1499	21	1481	14	1457	18	1457	18	1.6
13SMPR_3	6.9	0.044	2.026	0.021	0.1925	0.0017	0.66303	1134.7	9.2	1123.9	7.1	1106.2	8.7	1123.9	7.1	1.0
13SMPR_4	2.9	0.015	5.812	0.034	0.3631	0.0021	0.42181	1996.7	9.7	1948	5.1	1895.1	5.6	1895.1	5.6	2.8
13SMPR_5	23	0.039	1.986	0.015	0.1920	0.0015	0.59969	1131.9	8.1	1110.6	5.3	1073.6	5.9	1110.6	5.3	1.9
13SMPR_6	7.4	0.03	2.001	0.012	0.1892	0.0011	0.53888	1117.1	5.8	1115.7	3.9	1119.4	6.1	1115.7	3.9	0.1
13SMPR_7	10	0.022	5.201	0.039	0.3378	0.0025	0.67524	1877	12	1852.4	6.4	1821.8	5.5	1821.8	5.5	1.7
13SMPR_8	2.4	0.015	5.975	0.035	0.3708	0.0020	0.50747	2033.2	9.5	1972.7	5.1	1910.5	5.2	1910.5	5.2	3.3
13SMPR_9	1.9	0.014	13.860	0.110	0.5477	0.0043	0.57125	2815	18	2739.6	7.5	2689.1	6.5	2689.1	6.5	1.9
13SMPR_10	2.5	0.063	2.318	0.038	0.2090	0.0029	0.088646	1223	15	1217	11	1195	26	1195	11	0.5
13SMPR_11	7.6	0.039	3.441	0.040	0.2755	0.0030	0.78996	1568	15	1513	9.1	1440.9	8.4	1440.9	8.4	5.0
13SMPR_12	0.54	0.023	7.212	0.065	0.4041	0.0037	0.50925	2187	17	2139.3	7.5	2090.7	8.9	2090.7	8.9	2.3
13SMPR_13	3.9	0.033	4.763	0.044	0.3207	0.0032	0.90904	1795	16	1777.9	7.7	1756.4	4.1	1756.4	4.1	1.2
13SMPR_14	13	0.026	3.352	0.021	0.2717	0.0019	0.68478	1549.5	9.6	1493.7	4.8	1424.2	5.8	1424.2	5.8	4.9
13SMPR_15	0.69	0.031	5.356	0.047	0.3455	0.0037	0.32689	1913	18	1877.5	7.4	1833	12	1833	12	2.4
13SMPR_16	0.74	0.023	5.778	0.042	0.3590	0.0031	0.24444	1977	15	1943.6	6.2	1908.7	8.4	1908.7	8.4	1.8
13SMPR_17	2.2	0.047	2.498	0.043	0.2224	0.0022	0.4063	1294	12	1270	12	1252	18	1252	18	1.4
13SMPR_18	4.2	0.019	5.502	0.035	0.3565	0.0024	0.5086	1965	11	1900.7	5.5	1829.9	5.7	1829.9	5.7	3.9
13SMPR_19	1.1	0.032	5.439	0.064	0.3462	0.0037	0.84873	1916	18	1890	10	1861	14	1861	14	1.6
13SMPR_20	0.49	0.1	1.988	0.065	0.1868	0.0037	0.36743	1106	19	1108	22	1120	32	1108	22	0.2
13SMPR_21	6	0.044	2.153	0.018	0.2026	0.0018	0.51813	1189.1	9.6	1167.3	5.9	1112.6	8.8	1167.3	5.9	1.8
13SMPR_22	1.3	0.018	5.366	0.044	0.3440	0.0022	0.47861	1906	11	1879	6.9	1844.2	8	1844.2	8	1.9
13SMPR_23	2.7	0.084	2.620	0.180	0.1853	0.0030	0.3114	1096	16	1307	49	1710	120	1710	120	23.6

13SMPR_24	0.22	0.018	5.699	0.031	0.3621	0.0024	0.58016	1992	11	1931.1	4.7	1870.5	6.7	1870.5	6.7	3.2
13SMPR_25	14	0.015	7.095	0.037	0.4017	0.0025	0.57568	2178	11	2123.3	4.6	2067.7	5.5	2067.7	5.5	2.7
13SMPR_26	1.4	0.05	3.778	0.049	0.2462	0.0030	0.65405	1418	15	1587	10	1827	13	1827	13	13.1
13SMPR_27	2.7	0.024	5.190	0.039	0.3310	0.0026	0.31753	1843	13	1850.9	6.3	1856.2	8.2	1856.2	8.2	0.3
13SMPR_28	1.4	0.027	5.259	0.044	0.3408	0.0032	0.43414	1892	15	1861.9	7.1	1826.4	9.7	1826.4	9.7	1.9
13SMPR_29	0.75	0.023	5.019	0.046	0.3284	0.0025	0.26473	1830	12	1822	7.7	1820.6	9.4	1820.6	9.4	0.1
13SMPR_30	1.7	0.048	1.682	0.012	0.1682	0.0013	0.45311	1001.9	7.3	1001.4	4.7	997	10	1001.4	4.7	0.0
13SMPR_31	5.6	0.014	9.040	0.046	0.4511	0.0029	0.5524	2400	13	2341.8	4.7	2289.3	4.8	2289.3	4.8	2.3
13SMPR_32	1.8	0.025	5.371	0.046	0.3313	0.0028	0.29445	1844	13	1879.7	7.3	1917	12	1917	12	1.9
13SMPR_33	6.2	0.018	4.986	0.028	0.3335	0.0020	0.51525	1855.3	9.8	1816.8	4.8	1773.5	4.3	1773.5	4.3	2.4
13SMPR_34	3.8	0.019	5.142	0.028	0.3304	0.0020	0.57119	1839.9	9.8	1843.5	4.5	1847.6	5.6	1847.6	5.6	0.2
13SMPR_35	3.8	0.02	5.809	0.047	0.3543	0.0025	0.59195	1955	12	1947.3	7	1936.8	6.7	1936.8	6.7	0.5
13SMPR_36	2	0.039	1.876	0.012	0.1828	0.0013	0.59396	1081.9	7.1	1072.4	4.4	1054.6	6.5	1072.4	4.4	0.9
13SMPR_37	2.2	0.025	2.248	0.014	0.2077	0.0011	0.48002	1216.6	5.7	1195.8	4.3	1158	7.3	1195.8	4.3	1.7
13SMPR_38	7.1	0.017	12.960	0.130	0.5221	0.0045	0.63017	2708	19	2678	10	2639.8	7.5	2639.8	7.5	1.4
13SMPR_39	0.32	0.032	4.200	0.056	0.2983	0.0028	0.022644	1683	14	1675	10	1662	16	1662	16	0.8
13SMPR_40	1.1	0.13	0.845	0.012	0.0945	0.0011	0.16632	582	6.5	621.3	6.7	774	33	621.3	6.7	6.8
13SMPR_41	18	0.027	3.308	0.023	0.2605	0.0018	0.59942	1492.4	9.2	1482.6	5.4	1467.9	7	1467.9	7	1.0
13SMPR_42	15	0.014	7.154	0.041	0.3997	0.0023	0.39421	2167	10	2130.6	5.1	2094.5	6.2	2094.5	6.2	1.7
13SMPR_43	2.3	0.03	3.165	0.027	0.2542	0.0019	0.4635	1460	9.8	1448.3	6.7	1435	11	1435	11	0.9
13SMPR_44	1.3	0.074	1.984	0.037	0.1918	0.0026	0.35115	1131	14	1109	12	1063	20	1109	12	1.9
13SMPR_45	4.8	0.049	2.295	0.029	0.2109	0.0021	0.43021	1233	11	1210.4	8.9	1163	13	1163	8.9	1.8
13SMPR_46	1	0.031	5.132	0.064	0.3282	0.0034	0.068013	1832	16	1840	11	1850	11	1850	11	0.5
13SMPR_47	8.9	0.018	5.601	0.033	0.3640	0.0024	0.55578	2002	12	1916.8	5.2	1826.7	7.1	1826.7	7.1	4.9
13SMPR_48	4.9	0.021	4.494	0.028	0.3100	0.0020	0.42845	1740	10	1730.6	4.9	1716.2	7	1716.2	7	0.8
13SMPR_49	9.9	0.016	8.104	0.074	0.4241	0.0029	0.72663	2279	13	2244.1	8.6	2213.7	7.6	2213.7	7.6	1.4
13SMPR_50	2.4	0.082	1.913	0.030	0.1820	0.0026	0.21238	1078	14	1085	11	1109	27	1085	11	0.6
13SMPR_51	2.5	0.02	6.020	0.037	0.3714	0.0027	0.62869	2036	13	1978.6	5.4	1924.8	5.5	1924.8	5.5	2.8
13SMPR_52	35	1.2	0.156	0.011	0.0159	0.0003	0.37893	101.6	1.9	146.2	9.6	960	120	DISC	DISC	43.9
13SMPR_53	11	0.027	3.359	0.023	0.2661	0.0019	0.56781	1520.7	9.7	1494.6	5.4	1452.5	8	1452.5	8	2.9

13SMPR_54	5.6	0.04	2.288	0.013	0.2094	0.0017	0.14294	1225.6	9.3	1208.4	4	1177	12	1177	4	1.4
13SMPR_55	2	0.043	1.957	0.022	0.1885	0.0015	0.11382	1113.1	8.3	1101.2	7.3	1075	12	1101.2	7.3	1.1
13SMPR_56	5.6	0.017	5.142	0.025	0.3342	0.0019	0.52753	1858.4	8.9	1842.9	4.1	1826.9	5.7	1826.9	5.7	0.9
13SMPR_57	0.78	0.023	3.263	0.020	0.2607	0.0016	0.37529	1493.4	8	1472.2	4.8	1443	7.7	1443	7.7	2.0
13SMPR_58	2.8	0.071	1.935	0.022	0.1847	0.0024	0.71673	1093	13	1092.9	7.8	1088	11	1092.9	7.8	0.0
13SMPR_59	4.1	0.027	2.997	0.022	0.2404	0.0015	0.42425	1388.8	8	1408	5.8	1440.2	7.1	1440.2	7.1	2.2
13SMPR_60	2.1	0.016	13.245	0.098	0.5210	0.0042	0.71582	2703	18	2696.8	7	2691.6	5.8	2691.6	5.8	0.2
13SMPR_61	22	0.83	2.900	0.250	0.0723	0.0041	0.90715	450	25	1376	64	3423	56	DISC	DISC	59.8
13SMPR_62	2.2	0.023	5.653	0.046	0.3496	0.0028	0.41275	1934	13	1923.8	7	1915	7.5	1915	7.5	0.5
13SMPR_63	6.2	0.018	7.000	0.040	0.3964	0.0028	0.68618	2152	13	2111.2	5	2072.9	5.2	2072.9	5.2	1.8
13SMPR_64	0.5	0.21	0.497	0.012	0.0653	0.0009	0.02846	407.6	5.2	410.5	8.3	462	37	410.5	8.3	0.7
13SMPR_65	3.1	0.024	5.184	0.041	0.3380	0.0026	0.64909	1879	13	1849.6	6.8	1829.2	7.8	1829.2	7.8	1.1
13SMPR_66	1	0.022	5.361	0.035	0.3416	0.0025	0.3836	1894	12	1878.4	5.5	1854.1	7.1	1854.1	7.1	1.3
13SMPR_67	0.84	0.043	2.023	0.023	0.1939	0.0016	0.00063765	1142.3	8.8	1122.8	7.9	1097	19	1122.8	7.9	1.7
13SMPR_68	1.1	0.022	4.919	0.034	0.3299	0.0024	0.82547	1838	12	1805.3	5.8	1769.2	5.9	1769.2	5.9	2.0
13SMPR_69	4.3	0.025	5.453	0.037	0.3504	0.0032	0.40773	1938	15	1893	5.8	1838.5	9.5	1838.5	9.5	3.0
13SMPR_70	0.9	0.05	2.920	0.052	0.2418	0.0031	0.21514	1395	16	1385	14	1380	20	1380	20	0.4
13SMPR_71	4.1	0.15	0.493	0.007	0.0654	0.0006	0.42976	408.3	3.9	406.8	4.9	402	18	406.8	4.9	0.4
13SMPR_72	2	0.039	1.885	0.017	0.1811	0.0013	0.49805	1073	7	1076.5	6.3	1086.9	9.3	1076.5	6.3	0.3
13SMPR_73	2.2	0.021	5.393	0.032	0.3515	0.0026	0.53148	1942	12	1884.3	5.2	1821.1	6.5	1821.1	6.5	3.5
13SMPR_74	1.1	0.068	3.292	0.062	0.2617	0.0046	0.6246	1498	24	1481	14	1459	14	1459	14	1.5
13SMPR_75	1.7	0.042	2.902	0.028	0.2338	0.0022	0.51557	1356	12	1382.1	7.3	1420.2	8.6	1420.2	8.6	2.7
13SMPR_76	0.91	0.04	2.169	0.017	0.2011	0.0017	0.50885	1180.9	8.9	1170.8	5.6	1150.4	9.2	1170.8	5.6	0.9
13SMPR_77	3.8	0.027	3.289	0.024	0.2650	0.0019	0.36207	1515.1	9.6	1478.9	5.6	1434	11	1434	11	3.1
13SMPR_78	2.9	0.024	3.269	0.020	0.2628	0.0016	0.37957	1503.8	8.3	1473.5	4.8	1432	8.9	1432	8.9	2.9
13SMPR_79	0.88	0.078	2.482	0.058	0.2187	0.0038	0.34963	1274	20	1267	17	1266	21	1266	21	0.1
13SMPR_80	0.22	0.085	2.051	0.051	0.1896	0.0031	0.3214	1119	17	1132	16	1168	26	1132	16	1.2
13SMPR_81	1.1	0.03	5.331	0.059	0.3403	0.0035	0.37003	1888	17	1873.1	9.5	1854	11	1854	11	1.0
13SMPR_82	2.2	0.021	4.831	0.031	0.3247	0.0022	0.72999	1814	11	1790.1	5.5	1761.4	4.7	1761.4	4.7	1.6
13SMPR_83	2.9	0.028	4.210	0.033	0.3010	0.0025	0.58372	1696	12	1675.6	6.5	1649.2	7.3	1649.2	7.3	1.6

13SMPR_84	2.4	0.052	1.957	0.023	0.1869	0.0018	0.43924	1104.6	9.8	1100.1	7.8	1099	11	1100.1	7.8	0.4
13SMPR_85	1.3	0.069	1.043	0.012	0.1186	0.0010	0.33793	722.4	5.6	726.4	6.2	733	14	726.4	6.2	0.6
13SMPR_86	2	0.04	1.859	0.016	0.1831	0.0014	0.44591	1084.6	7.3	1066.4	5.6	1043.8	9.9	1066.4	5.6	1.7
13SMPR_87	2.4	0.038	1.953	0.019	0.1876	0.0013	0.306	1108.2	7.3	1099.1	6.7	1093	14	1099.1	6.7	0.8
13SMPR_88	1.2	0.024	5.319	0.048	0.3464	0.0028	0.55277	1917	13	1872.5	7.6	1827.2	9	1827.2	9	2.5
13SMPR_89	3.3	0.023	5.353	0.037	0.3460	0.0028	0.31407	1915	14	1878.6	5.9	1834.3	8.4	1834.3	8.4	2.4
13SMPR_90	9.1	0.019	5.360	0.036	0.3490	0.0023	0.42892	1930	11	1879	5.6	1822.8	7.5	1822.8	7.5	3.1
13SMPR_91	1.2	0.03	6.085	0.080	0.3730	0.0043	0.22472	2043	20	1989	11	1935	14	1935	14	2.8
13SMPR_92	3.4	0.032	2.144	0.020	0.2007	0.0013	0.35684	1179.1	6.9	1162.6	6.6	1123.5	9.9	1162.6	6.6	1.4
13SMPR_93	1.2	0.14	0.520	0.006	0.0680	0.0007	0.45268	424.1	3.9	425.3	3.9	430	13	425.3	3.9	0.3
13SMPR_94	1.3	0.055	2.046	0.027	0.1931	0.0020	0.30632	1138	11	1130.2	9.1	1111	14	1130.2	9.1	0.7
13SMPR_95	1.2	0.057	2.038	0.029	0.1957	0.0022	0.20437	1152	12	1127.6	9.6	1086	16	1127.6	9.6	2.1
13SMPR_96	7.5	0.025	3.273	0.021	0.2626	0.0018	0.54993	1502.9	9	1475.2	4.9	1435.8	7.3	1435.8	7.3	2.7
13SMPR_97	3.8	0.037	2.028	0.021	0.1938	0.0014	0.41548	1141.7	7.6	1125.5	7	1091	11	1125.5	7	1.4
13SMPR_98	2.3	0.023	6.694	0.081	0.3931	0.0037	0.74361	2139	17	2075	11	2010.8	9.4	2010.8	9.4	3.2
13SMPR_99	4.6	0.043	1.988	0.019	0.1907	0.0016	0.5514	1125.2	8.5	1111	6.5	1084	11	1111	6.5	1.3
13SMPR_100	7	0.046	4.785	0.060	0.3083	0.0046	0.86475	1732	22	1782	11	1853.8	6.4	1853.8	6.4	3.9
13SMPR_101	2.3	0.039	1.965	0.020	0.1861	0.0013	0.11587	1100	7.3	1104.1	6.6	1109	13	1104.1	6.6	0.4
13SMPR_102	1.2	0.036	2.231	0.016	0.2073	0.0016	0.3802	1214.5	8.6	1190.5	5.1	1143	11	1190.5	5.1	2.0
13SMPR_103	2.8	0.052	2.487	0.039	0.2189	0.0025	0.18439	1276	13	1263.9	9.5	1250	17	1250	17	1.1
13SMPR_104	3.3	0.022	5.776	0.034	0.3639	0.0029	0.39876	2000	14	1942.5	5.1	1878.1	7.4	1878.1	7.4	3.4
13SMPR_105	1.1	0.045	2.741	0.035	0.2359	0.0025	0.25075	1365	13	1340.3	9.3	1319	17	1319	17	1.6
13SMPR_106	5.9	0.023	6.012	0.044	0.3680	0.0030	0.50094	2020	14	1977.2	6.3	1932.4	7.9	1932.4	7.9	2.3
13SMPR_107	3.9	0.017	5.901	0.031	0.3626	0.0023	0.6693	1994	11	1961.3	4.5	1923.6	4.6	1923.6	4.6	2.0
13SMPR_108	12	0.017	5.924	0.029	0.3666	0.0023	0.6796	2013	11	1964.7	4.3	1920.5	4.9	1920.5	4.9	2.3
13SMPR_109	7.3	0.031	2.114	0.014	0.1962	0.0012	0.37463	1154.9	6.3	1153.1	4.5	1148.5	7.6	1153.1	4.5	0.2
13SMPR_110	8.9	0.028	3.854	0.033	0.2678	0.0020	0.60487	1530	10	1603.9	7	1691.9	7.4	1691.9	7.4	5.2
13SMPR_111	4.2	0.038	3.023	0.028	0.2509	0.0023	0.38523	1443	12	1412.9	7.1	1375	12	1375	12	2.8
13SMPR_112	10	0.036	2.225	0.018	0.2073	0.0015	0.47748	1214.2	7.9	1188.7	5.8	1145	10	1188.7	5.8	2.1
13SMPR_113	5.5	0.018	4.978	0.026	0.3316	0.0021	0.63364	1846.2	9.9	1815.4	4.5	1777.3	4.3	1777.3	4.3	2.1

13SMPR_114	5.4	0.031	5.309	0.056	0.3355	0.0035	0.45748	1865	17	1869.7	9	1872	11	1872	11	0.1
13SMPR_115	2.3	0.025	4.942	0.047	0.3334	0.0027	0.65691	1856	14	1808.9	8	1755.2	8.8	1755.2	8.8	3.1
13SMPR_116	5.8	0.02	5.997	0.046	0.3706	0.0028	0.58445	2036	13	1975	6.7	1918.3	7.2	1918.3	7.2	3.0
13SMPR_117	2.9	0.015	5.536	0.032	0.3576	0.0019	0.16551	1970.6	9.1	1906	5	1836	7.4	1836	7.4	3.8
13SMPR_118	4.5	0.05	2.365	0.028	0.2125	0.0022	0.59033	1242	12	1231.3	8.5	1199	12	1199	8.5	0.9
13SMPR_119	1.9	0.034	3.734	0.041	0.2583	0.0023	0.82458	1481	12	1579	8.7	1714.6	7	1714.6	7	7.9
13SMPR_120	9.7	0.03	2.756	0.021	0.2339	0.0016	0.31944	1354.7	8.6	1343.5	5.6	1320.3	8	1320.3	8	1.8
13SM01_1	201.9	1.79	2.100	0.044	0.1874	0.0023	0.47533	1147	14	1107	12	1234	31	1107	12	3.5
13SM01_2	26.95	1.336	3.210	0.100	0.2564	0.0040	0.39618	1458	25	1471	21	1450	34	1450	34	1.4
13SM01_3	375	1.363	2.576	0.027	0.1669	0.0020	0.80854	1295.6	7.6	995	11	1834.2	8.5	995	11	23.2
13SM01_4	47.5	0.76	5.333	0.046	0.3432	0.0035	0.67747	1873.6	7.3	1902	17	1834.3	9.8	1834.3	9.8	3.7
13SM01_5	38.8	0.443	13.420	0.150	0.5410	0.0059	0.77251	2710	11	2787	25	2656.4	7.6	2656.4	7.6	4.9
13SM01_6	176.5	2.16	1.802	0.024	0.1738	0.0025	0.71296	1045.6	8.8	1033	14	1068	12	1033	14	1.2
13SM01_7	79.5	0.911	5.113	0.037	0.3283	0.0024	0.34626	1837.9	6.2	1830	11	1847.9	9.1	1847.9	9.1	1.0
13SM01_8	291.9	42	0.587	0.017	0.0738	0.0012	0.76828	468	11	458.7	7.2	521	30	458.7	7.2	2.0
13SM01_9	74.2	0.3368	6.001	0.043	0.3613	0.0026	0.46365	1976.4	6.1	1988	12	1965.6	7.7	1965.6	7.7	1.1
13SM01_10	80.3	1.187	3.907	0.037	0.2831	0.0020	0.56854	1614.6	7.6	1606.7	9.9	1620	11	1620	11	0.8
13SM01_11	85.8	0.772	2.562	0.017	0.2129	0.0017	0.39326	1289.7	4.9	1245.3	9.3	1365.6	9.6	1365.6	9.6	8.8
13SM01_12	405	0.65	7.840	0.150	0.3531	0.0058	0.97297	2216	18	1948	28	2464.1	8.3	2464.1	8.3	20.9
13SM01_13	354	5.9	5.029	0.034	0.3360	0.0025	0.73183	1823.8	5.8	1867	12	1776.1	5.1	1776.1	5.1	5.1
13SM01_14	30.5	0.3869	4.963	0.062	0.3203	0.0047	0.54374	1812	10	1791	23	1843	14	1843	14	2.8
13SM01_15	75	1.414	1.923	0.027	0.1849	0.0022	0.64793	1089.9	9	1094	12	1086	12	1094	12	0.4
13SM01_16	437	0.6888	0.622	0.005	0.0802	0.0005	0.4512	491.2	3.2	497.6	3.2	470.6	9.2	497.6	3.2	1.3
13SM01_17	74.6	0.833	5.258	0.048	0.3398	0.0026	0.53639	1861.5	7.8	1887	12	1839.1	8.6	1839.1	8.6	2.6
13SM01_18	163.2	0.754	3.106	0.031	0.2496	0.0032	0.72509	1433.9	7.8	1436	16	1432.4	7.1	1432.4	7.1	0.3
13SM01_19	86.5	1.354	4.015	0.028	0.2891	0.0023	0.52453	1638.4	5.7	1637	12	1646.4	8.8	1646.4	8.8	0.6
13SM01_20	71.9	0.6401	5.613	0.070	0.3477	0.0044	0.88167	1917	11	1923	21	1908.5	9.4	1908.5	9.4	0.8
13SM01_21	137	0.4414	15.267	0.099	0.5547	0.0036	0.66471	2831.7	6.1	2844	15	2822.5	4.8	2822.5	4.8	0.8

13SM01_22	160	0.9274	3.314	0.073	0.2228	0.0049	0.92381	1486	17	1299	26	1758	7.5	1758	7.5	26.1
13SM01_23	1074	4.74	3.125	0.076	0.2128	0.0047	0.9132	1438	19	1244	25	1741	12	1741	12	28.5
13SM01_23	557	1.43	3.914	0.057	0.2612	0.0042	0.83223	1618	12	1496	22	1781.1	9.9	1781.1	9.9	16.0
13SM01_24	37	1.075	5.076	0.045	0.3250	0.0027	0.27956	1831.5	7.5	1814	13	1844	11	1844	11	1.6
13SM01_25	294.8	1.19	5.000	0.027	0.3301	0.0019	0.57441	1819.1	4.6	1838.8	9.1	1789.5	5.2	1789.5	5.2	2.8
13SM01_26	20.24	0.731	5.675	0.074	0.3406	0.0036	0.30244	1924	11	1889	17	1973	17	1973	17	4.3
13SM01_27	49	1.562	1.903	0.041	0.1830	0.0034	0.46663	1080	14	1083	18	1082	19	1083	18	0.3
13SM01_28	129	1.802	4.231	0.090	0.2963	0.0064	0.98475	1671	23	1671	33	1687.1	7.4	1687.1	7.4	1.0
13SM01_29	104.6	1.425	4.240	0.027	0.3016	0.0022	0.61433	1681.5	5.2	1699	11	1655.8	8.7	1655.8	8.7	2.6
13SM01_30	82.6	0.7195	0.534	0.009	0.0690	0.0007	0.13777	434.8	5.7	430.4	4.6	451	31	430.4	4.6	1.0
13SM01_31	115.9	1.028	1.876	0.019	0.1820	0.0017	0.40982	1072.2	6.7	1077.9	9.2	1056	12	1077.9	9.2	0.5
13SM01_32	128.5	0.997	3.221	0.031	0.2574	0.0021	0.77979	1463	7.1	1476	11	1437.3	8.8	1437.3	8.8	2.7
13SM01_33	31.68	0.702	4.189	0.054	0.3007	0.0039	0.26008	1671	11	1695	20	1650	19	1650	19	2.7
13SM01_34	19.7	0.7076	3.185	0.043	0.2559	0.0031	0.45995	1454	11	1469	16	1448	19	1448	19	1.5
13SM01_35	88.1	1.239	2.454	0.026	0.2186	0.0020	0.55211	1258.2	7.6	1274	10	1229	13	1229	13	3.7
13SM01_36	110	1.168	1.969	0.018	0.1787	0.0019	0.34482	1106.4	6	1060	11	1199	15	1060	11	4.2
13SM01_37	198	1.262	4.577	0.029	0.3185	0.0023	0.4836	1744.9	5.3	1782	11	1701.5	8.6	1701.5	8.6	4.7
13SM01_38	107.8	1.35	4.449	0.059	0.3075	0.0042	0.92197	1720	11	1728	21	1709.6	6.7	1709.6	6.7	1.1
13SM01_39	79.5	0.4732	5.352	0.045	0.3454	0.0033	0.62955	1876.7	7.2	1912	16	1835	7.8	1835	7.8	4.2
13SM01_40	59.8	0.823	14.350	0.120	0.5441	0.0052	0.67398	2773.6	8.2	2800	22	2754.4	6.7	2754.4	6.7	1.7
13SM01_41	219	1.82	2.230	0.020	0.2033	0.0017	0.61722	1191	6.5	1193	9.1	1192.3	9.5	1193	9.1	0.2
13SM01_42	341	0.867	2.708	0.051	0.2163	0.0039	0.96055	1329	14	1262	21	1435.9	6.3	1435.9	6.3	12.1
13SM01_43	59.6	0.851	10.990	0.150	0.4349	0.0050	0.81675	2521	13	2327	22	2680	7.8	2680	7.8	13.2
13SM01_44	13.5	0.989	2.007	0.050	0.1884	0.0033	0.1066	1117	17	1112	18	1146	32	1112	18	0.4
13SM01_45	108.8	2.675	2.079	0.033	0.1960	0.0023	0.78451	1141	11	1154	13	1111	16	1154	13	1.1
13SM01_46	71.2	2.421	5.210	0.046	0.3401	0.0028	0.60733	1853.8	7.5	1887	13	1828	8.6	1828	8.6	3.2
13SM01_47	69.1	0.7443	4.117	0.055	0.2938	0.0036	0.72201	1660	11	1660	18	1658	10	1658	10	0.1
13SM01_48	73.2	1.363	2.829	0.029	0.2419	0.0024	0.36175	1362.8	7.6	1397	12	1315	15	1315	15	6.2
13SM01_49	174	2.214	3.812	0.076	0.2689	0.0048	0.89615	1594	16	1535	24	1671	13	1671	13	8.1
13SM01_50	108.8	1.027	0.524	0.010	0.0693	0.0009	0.42993	427.9	6.9	433.3	5.2	424	22	433.3	5.2	1.3

13SM01_51	119.9	1.512	4.535	0.041	0.3178	0.0027	0.67547	1739	7.8	1780	13	1693.3	8.1	1693.3	8.1	5.1
13SM01_52	331	1.453	1.715	0.014	0.1599	0.0015	0.69493	1013.7	5.3	955.9	8.2	1133.7	7.2	955.9	8.2	5.7
13SM01_53	41.1	0.6028	5.221	0.045	0.3350	0.0030	0.28578	1856.6	7.6	1864	15	1850	12	1850	12	0.8
13SM01_54	177	0.7374	2.129	0.028	0.1754	0.0022	0.74224	1158.7	9.3	1042	12	1394	12	1042	12	10.1
13SM01_55	64.8	1.231	3.632	0.094	0.2648	0.0024	0.53172	1556	21	1514	12	1628	38	1628	38	7.0
13SM01_56	52.5	0.869	5.893	0.054	0.3631	0.0031	0.74956	1959.6	8	1996	14	1913.9	7.6	1913.9	7.6	4.3
13SM01_57	193	1.406	2.018	0.014	0.1926	0.0012	0.41043	1122	4.8	1135.4	6.7	1098	8.8	1135.4	6.7	1.2
13SM01_58	1040	0.806	1.306	0.076	0.1104	0.0055	0.99099	840	34	674	32	1319	20	674	32	19.8
13SM01_59	347	1.2666	0.719	0.006	0.0895	0.0006	0.23584	550.3	3.6	552.5	3.4	535	12	552.5	3.4	0.4
13SM01_60	492	4.74	1.942	0.013	0.1840	0.0013	0.61803	1096.2	4.4	1088.6	7	1105.6	6.9	1088.6	7	0.7
13SM01_61	203.4	1.362	7.253	0.069	0.4022	0.0034	0.6936	2143.5	8.3	2180	16	2103.4	8.9	2103.4	8.9	3.6
13SM01_62	252.8	1.603	4.167	0.035	0.2904	0.0027	0.76115	1668.2	7.1	1643	14	1705.9	6.4	1705.9	6.4	3.7
13SM01_63	123.8	1.121	1.753	0.014	0.1739	0.0010	0.2529	1027.9	5.2	1033.3	5.6	1020	11	1033.3	5.6	0.5
13SM01_64	55.9	0.891	3.312	0.032	0.2650	0.0023	0.58612	1483.4	7.5	1515	12	1432	8.8	1432	8.8	5.8
13SM01_65	102.1	0.973	2.821	0.020	0.2412	0.0017	0.43855	1361	5.4	1392.6	8.9	1308	10	1308	10	6.5
13SM01_66	58	1.186	2.169	0.031	0.2029	0.0028	0.33892	1170	10	1191	15	1155	18	1191	15	1.8
13SM01_67	58.3	0.7692	5.290	0.045	0.3394	0.0022	0.58682	1866.8	7.2	1883	11	1841.2	9.4	1841.2	9.4	2.3
13SM01_68	54.6	0.527	6.017	0.067	0.3729	0.0036	0.66542	1977.6	9.8	2043	17	1909.2	7.2	1909.2	7.2	7.0
13SM01_70	44.6	1.639	4.256	0.041	0.2961	0.0023	0.26158	1684.3	7.9	1672	11	1695	10	1695	10	1.4
13SM01_71	929	1.059	0.862	0.023	0.0747	0.0024	0.97539	630	13	464	15	1303	14	464	15	26.3
13SM01_72	274	1.039	3.854	0.053	0.2521	0.0032	0.81425	1603	11	1449	16	1819.4	6.1	1819.4	6.1	20.4
13SM01_73	7.15	1.656	1.975	0.064	0.1858	0.0040	0.12088	1103	22	1098	22	1125	41	1098	22	0.5
13SM01_74	55.9	0.953	2.029	0.025	0.1955	0.0021	0.58206	1124.5	8.3	1151	11	1077	12	1151	11	2.4
13SM01_75	79.3	0.888	2.032	0.019	0.1915	0.0018	0.41243	1125.9	6.4	1130.5	9.6	1124	10	1130.5	9.6	0.4
13SM01_76	82.9	1.794	4.678	0.036	0.3247	0.0025	0.14577	1762.9	6.4	1812	12	1709	10	1709	10	6.0
13SM01_77	15.84	0.609	1.926	0.037	0.1859	0.0035	0.27053	1089	13	1099	19	1065	24	1099	19	0.9
13SM01_78	155.6	1.249	4.703	0.036	0.3114	0.0027	0.67204	1767.4	6.4	1747	13	1787.8	5.2	1787.8	5.2	2.3
13SM01_79	128.9	1.585	2.514	0.040	0.2165	0.0033	0.84229	1275	12	1263	18	1304.8	9.1	1304.8	9.1	3.2
13SM01_80	274	0.97	1.630	0.027	0.1533	0.0026	0.77638	981	11	919	14	1127	21	919	14	6.3
13SM01_80	123	1.528	2.007	0.026	0.1917	0.0030	0.40986	1117.6	8.7	1130	16	1097	18	1130	16	1.1

13SM01_81	199	0.981	5.558	0.034	0.3589	0.0020	0.53256	1909.4	5.3	1976.8	9.6	1833.3	6.9	1833.3	6.9	7.8
13SM01_82	261.2	1.602	11.811	0.089	0.4504	0.0035	0.73047	2590	7.2	2397	16	2750.4	6.3	2750.4	6.3	12.8
13SM01_83	96.4	1.693	5.538	0.079	0.3445	0.0038	0.82511	1909	13	1908	18	1901.2	9.4	1901.2	9.4	0.4
13SM01_84	39.5	1.586	1.763	0.031	0.1719	0.0027	0.52051	1031	11	1022	15	1062	25	1022	15	0.9
13SM01_85	74.7	0.899	4.464	0.050	0.3148	0.0032	0.73079	1723.6	9.2	1764	16	1676.6	7.9	1676.6	7.9	5.2
13SM01_86	393	3.07	4.269	0.076	0.2806	0.0051	0.9519	1687	15	1593	26	1803	6.3	1803	6.3	11.6
13SM01_87	237	0.752	4.653	0.040	0.2927	0.0028	0.74499	1758.4	7.2	1655	14	1887.5	6.7	1887.5	6.7	12.3
13SM01_88	73.5	1.084	2.034	0.024	0.1920	0.0023	0.5064	1126.2	8.2	1132	12	1112	13	1132	12	0.5
13SM01_89	162.8	1.478	3.908	0.038	0.2708	0.0029	0.80454	1614.7	7.9	1545	15	1692	7.2	1692	7.2	8.7
13SM01_90	83.3	1.668	2.528	0.026	0.2171	0.0018	0.037903	1279.7	7.3	1266.4	9.5	1309	17	1309	17	3.3
13SM01_91	77.3	0.6463	12.954	0.082	0.5196	0.0038	0.57902	2676.9	6.2	2697	16	2660.3	6.8	2660.3	6.8	1.4
13SM01_92	49.6	0.4218	0.705	0.018	0.0828	0.0011	0.10671	541	11	512.8	6.6	650	33	512.8	6.6	5.2
13SM01_93	58.6	0.3221	5.185	0.056	0.3316	0.0036	0.72203	1849.4	9.2	1846	18	1859	11	1859	11	0.7
13SM01_94	119.2	0.959	4.978	0.060	0.3316	0.0043	0.79505	1816.4	9.9	1845	21	1783.1	8.9	1783.1	8.9	3.5
13SM01_95	58.4	0.711	5.373	0.042	0.3497	0.0028	0.51928	1881	6.7	1933	13	1814.1	8	1814.1	8	6.6
13SM01_96	134.1	1.175	4.280	0.042	0.2960	0.0025	0.76689	1688.9	8	1671	13	1710.3	6.8	1710.3	6.8	2.3
13SM01_97	212.1	1.54	4.007	0.054	0.2773	0.0039	0.66178	1635	11	1578	20	1711.4	9.7	1711.4	9.7	7.8
13SM01_98	243.4	1.104	5.291	0.034	0.3436	0.0024	0.77804	1867.1	5.5	1904	12	1824.9	6.1	1824.9	6.1	4.3
13SM01_99	98.7	1.344	3.275	0.028	0.2641	0.0020	0.47567	1474.7	6.7	1511	10	1434.8	9.7	1434.8	9.7	5.3
13SM01_101	132.5	1.009	5.168	0.040	0.3341	0.0028	0.59188	1846.9	6.6	1858	14	1834.3	7.9	1834.3	7.9	1.3
13SM01_102	76.2	0.822	5.394	0.038	0.3537	0.0028	0.81023	1883.6	6	1952	13	1805.2	8.2	1805.2	8.2	8.1
13SM01_103	172	1.209	0.469	0.006	0.0622	0.0005	0.17315	390.5	4	388.7	3.3	414	20	388.7	3.3	0.5
13SM01_105	1150	1.25	1.683	0.051	0.1363	0.0037	0.97786	999	21	823	21	1410	12	823	21	17.6
13SM01_106	235	1.488	2.086	0.016	0.1960	0.0013	0.6332	1144.7	5.3	1153.5	7.2	1134.4	9	1153.5	7.2	0.8
13SM01_107	108.4	1.537	4.694	0.043	0.3230	0.0034	0.80255	1765.7	7.7	1804	17	1721	8.8	1721	8.8	4.8
13SM01_108	343.6	1.728	2.848	0.044	0.2276	0.0039	0.84425	1367	12	1321	20	1447	12	1447	12	8.7
13SM01_109	473	0.996	2.042	0.076	0.1455	0.0039	0.97094	1125	25	875	22	1633	22	875	22	22.2
13SM01_110	146.5	0.991	1.903	0.080	0.1674	0.0070	0.97901	1074	28	995	39	1252	10	995	39	7.4
13SM01_111	558	1.082	3.280	0.110	0.2283	0.0077	0.96387	1473	26	1324	40	1701.7	7.1	1701.7	7.1	22.2
13SM01_112	334	0.454	2.075	0.056	0.1458	0.0047	0.95092	1139	18	877	26	1706	19	877	26	23.0

13SM01_113	51.2	1.2	1.879	0.023	0.1813	0.0020	0.47104	1074.2	7.8	1074	11	1077	12	1074	11	0.0
13SM01_115	76.8	0.797	3.553	0.085	0.2488	0.0039	0.59877	1537	19	1432	20	1696	64	1696	64	15.6
13SM01_116	85.3	0.87	5.842	0.050	0.3614	0.0032	0.53113	1953.2	7.2	1989	15	1910.7	9	1910.7	9	4.1
13SM01_118	461.6	1.204	6.210	0.180	0.2386	0.0059	0.93054	2004	24	1379	31	2732	13	DISC	DISC	49.5
13SM01_119	106.2	0.871	3.180	0.023	0.2547	0.0020	0.49445	1452.1	5.5	1462	10	1433.4	9.7	1433.4	9.7	2.0
13SM01_120	54.2	0.732	5.435	0.068	0.3483	0.0048	0.52322	1889	11	1926	23	1841	14	1841	14	4.6
13SM01_121	223	1.8	3.617	0.044	0.2511	0.0034	0.86107	1554	10	1444	17	1701.5	7.2	1701.5	7.2	15.1
13SM02_1	56.9	1.168	6.749	0.047	0.3768	0.0032	0.46802	2079.5	6.1	2061	15	2097.2	8.5	2097.2	8.5	1.7
13SM02_2	87.1	0.536	1.408	0.026	0.1168	0.0023	0.65157	892	11	712	13	1372	19	712	13	20.2
13SM02_2	32.1	0.692	2.010	0.047	0.1857	0.0051	0.70568	1118	16	1098	27	1162	22	1098	27	1.8
13SM02_3	77.4	0.564	2.448	0.063	0.1952	0.0048	0.53313	1257	18	1148	26	1440	13	1148	26	8.7
13SM02_3	52.4	0.66	3.284	0.072	0.2553	0.0044	0.58045	1477	17	1466	23	1479	23	1479	23	0.9
13SM02_4	646	3.33	1.778	0.022	0.1729	0.0030	0.62319	1037.4	8.2	1028	17	1064	22	1028	17	0.9
13SM02_4	69.7	1.231	2.675	0.041	0.2274	0.0027	0.60978	1322	11	1321	14	1326	15	1326	15	0.4
13SM02_5	82.7	1.086	5.771	0.039	0.3576	0.0030	0.45906	1942.5	5.7	1970	14	1915.8	6.5	1915.8	6.5	2.8
13SM02_6	22.3	0.9	5.979	0.059	0.3647	0.0033	0.54881	1972.1	8.6	2004	15	1944	12	1944	12	3.1
13SM02_7	201	0.628	0.540	0.006	0.0708	0.0006	0.44316	438.5	4.2	440.7	3.7	419	17	440.7	3.7	0.5
13SM02_8	115.2	0.864	11.416	0.076	0.4665	0.0035	0.67687	2557.4	6.3	2468	15	2634	6.6	2634	6.6	6.3
13SM02_9	18.68	1.327	1.886	0.031	0.1826	0.0022	0.35298	1077	10	1081	12	1062	19	1081	12	0.4
13SM02_10	80.8	0.7388	0.627	0.009	0.0801	0.0007	0.019256	493.9	5.4	496.7	4.4	492	24	496.7	4.4	0.6
13SM02_11	77.6	0.993	5.287	0.036	0.3445	0.0023	0.43073	1866.5	5.7	1908	11	1821.3	7.9	1821.3	7.9	4.8
13SM02_12	60.8	0.933	6.080	0.040	0.3757	0.0030	0.68857	1987.9	5.9	2056	14	1912	5.3	1912	5.3	7.5
13SM02_13	75	0.6093	5.520	0.042	0.3428	0.0026	0.65449	1903.3	6.6	1900	13	1920.1	7.7	1920.1	7.7	1.0
13SM02_14	111.1	0.6458	5.136	0.039	0.3356	0.0024	0.65904	1842.5	6.3	1865	12	1821.6	6.4	1821.6	6.4	2.4
13SM02_15	424	1.061	9.450	0.140	0.4218	0.0066	0.79553	2382	13	2268	30	2473.8	7.6	2473.8	7.6	8.3
13SM02_16	44	2.397	4.616	0.038	0.3190	0.0030	0.50157	1751.7	6.8	1784	15	1710.3	9.2	1710.3	9.2	4.3
13SM02_17	100.7	0.764	2.028	0.019	0.1920	0.0017	0.54344	1124.7	6.3	1132.3	9.1	1104.8	9.2	1132.3	9.1	0.7
13SM02_18	51.1	1.645	2.035	0.047	0.1923	0.0018	0.55966	1128	15	1133.7	9.6	1158	23	1133.7	9.6	0.5

13SM02_19	39	0.931	5.181	0.039	0.3337	0.0033	0.54488	1849.1	6.4	1856	16	1828.8	8.9	1828.8	8.9	1.5
13SM02_20	19.99	0.906	6.842	0.074	0.3874	0.0046	0.50413	2091.7	9.8	2110	21	2075	12	2075	12	1.7
13SM02_21	247	1.135	1.875	0.012	0.1797	0.0011	0.54572	1072.1	4.3	1065.5	6.2	1089.6	7.5	1065.5	6.2	0.6
13SM02_22	60.7	0.843	4.825	0.042	0.3260	0.0030	0.58324	1788.8	7.3	1818	14	1762.8	8.7	1762.8	8.7	3.1
13SM02_23	7.27	1.162	1.699	0.067	0.1579	0.0034	0.50499	1008	25	948	20	1114	31	948	20	6.0
13SM02_24	249	1.661	3.247	0.022	0.2604	0.0021	0.73024	1468.1	5.2	1491	11	1437.5	4.7	1437.5	4.7	3.7
13SM02_25	80.2	1.188	2.047	0.018	0.1939	0.0017	0.45582	1130.9	6.1	1145.2	9.7	1111	11	1145.2	9.7	1.3
13SM02_26	74	0.53	5.289	0.048	0.3459	0.0036	0.63806	1866.5	7.8	1915	17	1826.2	8.6	1826.2	8.6	4.9
13SM02_27	139	1.177	1.976	0.014	0.1913	0.0016	0.47584	1107	4.9	1128.4	8.5	1058	11	1128.4	8.5	1.9
13SM02_28	308	2.208	4.452	0.073	0.3061	0.0046	0.84895	1721	14	1721	23	1706.2	6.6	1706.2	6.6	0.9
13SM02_29	157.1	1.857	5.001	0.048	0.3294	0.0034	0.80205	1819.9	8	1837	17	1796.4	7	1796.4	7	2.3
13SM02_30	28.9	0.911	2.048	0.029	0.1925	0.0021	0.3763	1130.7	9.7	1135	11	1116	18	1135	11	0.4
13SM02_31	103.2	0.697	3.181	0.030	0.2544	0.0023	0.64059	1452.1	7.2	1461	12	1435.5	8.3	1435.5	8.3	1.8
13SM02_32	198.5	1.153	2.002	0.014	0.1898	0.0016	0.64507	1116	4.6	1120	8.8	1119.5	7.5	1120	8.8	0.4
13SM02_33	177.6	0.853	4.549	0.061	0.3001	0.0046	0.80976	1739	11	1691	23	1794.3	9.6	1794.3	9.6	5.8
13SM02_34	99.2	1.046	1.961	0.017	0.1880	0.0013	0.24696	1102.7	5.9	1110.2	7.2	1088	10	1110.2	7.2	0.7
13SM02_35	67.9	1.168	5.373	0.044	0.3461	0.0025	0.43465	1880	6.9	1917	12	1838.2	9	1838.2	9	4.3
13SM02_36	78	0.857	6.959	0.068	0.3920	0.0041	0.73707	2106.6	8.8	2134	18	2082.2	6.5	2082.2	6.5	2.5
13SM02_37	40.2	1.88	1.903	0.024	0.1810	0.0017	0.27537	1082.7	8.6	1072.2	9.6	1119	20	1072.2	9.6	1.0
13SM02_38	358	1.71	4.910	0.040	0.3261	0.0028	0.87557	1803.5	6.9	1819	13	1784.9	3.8	1784.9	3.8	1.9
13SM02_39	52	0.6754	13.200	0.120	0.5152	0.0041	0.63039	2693.2	8.3	2679	18	2699.1	7.4	2699.1	7.4	0.7
13SM02_40	55.8	0.9053	9.379	0.081	0.4573	0.0040	0.7149	2375.2	8	2427	18	2335.9	6.7	2335.9	6.7	3.9
13SM02_41	28.4	3.955	4.864	0.060	0.3245	0.0031	0.56829	1795	10	1814	15	1772	13	1772	13	2.4
13SM02_42	137.6	0.876	0.899	0.015	0.1044	0.0010	0.52731	652	8.4	640.3	5.9	699	25	640.3	5.9	1.8
13SM02_43	51.4	0.8551	5.031	0.041	0.3252	0.0036	0.59409	1824.2	6.8	1815	17	1840.8	9.8	1840.8	9.8	1.4
13SM02_44	62	2.48	2.158	0.028	0.2020	0.0019	0.44531	1166.8	8.9	1186	10	1136	16	1186	10	1.6
13SM02_45	511	7.14	2.002	0.019	0.1905	0.0018	0.88511	1116.6	6.7	1124	10	1098.9	6.6	1124	10	0.7
13SM02_46	48.9	1.516	5.555	0.092	0.3431	0.0059	0.85121	1907	14	1900	28	1907	8.5	1907	8.5	0.4
13SM02_47	74.2	1.564	1.986	0.021	0.1911	0.0020	0.5243	1110.3	7	1127	11	1065	12	1127	11	1.5
13SM02_48	242.2	0.887	5.526	0.042	0.3509	0.0036	0.60748	1904.4	6.6	1939	17	1875.9	9.5	1875.9	9.5	3.4

13SM02_49	96.2	1.884	6.649	0.099	0.3850	0.0038	0.82515	2066	13	2099	18	2028	11	2028	11	3.5
13SM02_50	107.2	0.6067	5.054	0.059	0.3344	0.0039	0.70422	1828.6	9.9	1859	19	1795.3	8.5	1795.3	8.5	3.5
13SM02_51	111.2	1.042	5.721	0.051	0.3558	0.0036	0.64603	1934	7.7	1964	17	1906	7.7	1906	7.7	3.0
13SM02_52	89.8	0.4037	7.520	0.120	0.4088	0.0068	0.84949	2174	14	2209	31	2138.6	9.6	2138.6	9.6	3.3
13SM02_53	107	1.402	1.971	0.024	0.1903	0.0020	0.44759	1105	8.2	1123	11	1080	14	1123	11	1.6
13SM02_54	44.8	0.44	14.110	0.160	0.5441	0.0060	0.6291	2756	11	2803	26	2715	10	2715	10	3.2
13SM02_55	189	1.732	2.035	0.022	0.1932	0.0018	0.2672	1126.8	7.2	1138.6	9.6	1107	11	1138.6	9.6	1.0
13SM02_56	144.8	1.087	1.852	0.026	0.1768	0.0024	0.71226	1063.3	9.1	1049	13	1090	10	1049	13	1.3
13SM02_57	43.8	0.533	5.300	0.053	0.3443	0.0036	0.39767	1869.6	8.2	1909	18	1832	11	1832	11	4.2
13SM02_58	54.85	0.8657	1.839	0.030	0.1750	0.0027	0.55387	1058	11	1039	15	1078	18	1039	15	1.8
13SM02_59	48.4	0.3953	23.220	0.270	0.6538	0.0080	0.9597	3231	14	3242	32	3230.1	6.3	3230.1	6.3	0.4
13SM02_60	50.2	0.746	5.402	0.048	0.3463	0.0030	0.4752	1884.6	7.7	1917	14	1843	10	1843	10	4.0
13SM02_61	43.9	0.924	2.066	0.025	0.1970	0.0021	0.23788	1139.2	8.2	1159	11	1101	14	1159	11	1.7
13SM02_62	36	0.409	5.282	0.050	0.3360	0.0032	0.53705	1865.3	8.1	1867	16	1861	10	1861	10	0.3
13SM02_63	143.3	1.161	1.968	0.016	0.1882	0.0015	0.44673	1104.5	5.4	1111.4	8	1091.5	9.2	1111.4	8	0.6
13SM02_64	11.07	1.872	12.390	0.290	0.5011	0.0076	0.72536	2630	22	2617	33	2660	22	2660	22	1.6
13SM02_65	67.7	0.7159	13.550	0.096	0.5295	0.0045	0.59976	2718.3	6.7	2739	19	2703.4	6.7	2703.4	6.7	1.3
13SM02_66	54.5	0.713	1.404	0.061	0.1350	0.0043	0.83822	889	26	816	24	1050	29	816	24	8.2
13SM02_66	26.5	1.144	1.864	0.050	0.1801	0.0034	0.64756	1067	18	1067	18	1072	21	1067	18	0.0
13SM02_67	242.2	2.647	11.940	0.110	0.4915	0.0066	0.76605	2599.5	9	2582	30	2600.7	9.8	2600.7	9.8	0.7
13SM02_68	187	1.262	4.289	0.036	0.3067	0.0024	0.91071	1690.8	7	1724	12	1650.2	7.9	1650.2	7.9	4.5
13SM02_69	42.6	1.479	2.096	0.028	0.2012	0.0023	0.42846	1148	8.8	1181	12	1106	17	1181	12	2.9
13SM02_70	73.6	1.808	3.146	0.030	0.2500	0.0019	0.49779	1443.6	7.3	1440	9.3	1445.4	9.3	1445.4	9.3	0.4
13SM02_71	83.3	1.251	1.984	0.024	0.1916	0.0021	0.63301	1110.6	8.3	1130	11	1084	13	1130	11	1.7
13SM02_72	97.7	0.874	1.988	0.016	0.1933	0.0014	0.40784	1111.8	5.6	1139	7.7	1068.8	8.4	1139	7.7	2.4
13SM02_73	56.7	1.717	2.033	0.022	0.1962	0.0017	0.13494	1126.2	7.3	1154.7	9.3	1077	15	1154.7	9.3	2.5
13SM02_74	20.3	0.649	8.790	0.130	0.4464	0.0071	0.4854	2318	15	2378	31	2245	19	2245	19	5.9
13SM02_75	61.7	1.498	5.598	0.055	0.3566	0.0027	0.60079	1916.1	8.6	1966	13	1864.3	9.5	1864.3	9.5	5.5
13SM02_76	161	1.344	2.021	0.017	0.1929	0.0014	0.4455	1122.4	5.9	1137	7.6	1091.1	8.4	1137	7.6	1.3
13SM02_77	161.9	1.271	4.359	0.031	0.3013	0.0024	0.82388	1705.3	6.2	1698	12	1712.7	7	1712.7	7	0.9

13SM02_78	123.3	0.622	3.490	0.250	0.1954	0.0033	0.18943	1516	58	1150	18	2040	140	1150	18	24.1
13SM02_78	77.1	1.003	6.080	0.520	0.2369	0.0034	0.72666	1970	74	1371	18	2670	120	DISC	DISC	48.7
13SM02_79	177.9	3.65	11.310	0.160	0.4717	0.0055	0.88088	2548	14	2490	24	2596.5	8.1	2596.5	8.1	4.1
13SM02_80	119	0.987	3.910	0.230	0.2706	0.0034	0.90431	1599	40	1544	17	1666	71	1666	71	7.3
13SM02_81	101.1	1.295	2.006	0.021	0.1928	0.0021	0.50243	1117.9	7.3	1136	11	1078	12	1136	11	1.6
13SM02_82	86.9	0.6342	5.843	0.049	0.3635	0.0033	0.60572	1953.2	7.4	1999	15	1908.1	7.5	1908.1	7.5	4.8
13SM02_83	72	0.6116	5.077	0.056	0.3288	0.0037	0.82427	1831.5	9.3	1835	18	1832	10	1832	10	0.2
13SM02_84	53.2	0.404	5.720	0.051	0.3546	0.0029	0.6148	1933.9	7.7	1956	14	1902	7.1	1902	7.1	2.8
13SM02_85	58.6	0.896	6.970	0.100	0.3914	0.0042	0.89429	2106	13	2129	20	2074	16	2074	16	2.7
13SM02_86	90.9	0.737	4.243	0.031	0.3054	0.0025	0.55428	1682.8	6.2	1718	12	1648	9.6	1648	9.6	4.2
13SM02_87	53.4	0.854	3.035	0.037	0.2515	0.0033	0.57341	1415.6	9.2	1446	17	1379	12	1379	12	4.9
13SM02_88	53.1	1.124	5.216	0.062	0.3406	0.0039	0.73307	1855	10	1889	19	1817.1	8.8	1817.1	8.8	4.0
13SM02_89	73.8	0.851	5.830	0.046	0.3640	0.0022	0.39021	1950.5	6.8	2001	10	1896.2	8.9	1896.2	8.9	5.5
13SM02_90	167.4	1.017	10.280	0.170	0.4052	0.0075	0.80609	2460	15	2192	34	2694	14	2694	14	18.6
13SM02_90	76.9	0.755	14.060	0.260	0.5520	0.0120	0.73221	2753	18	2832	51	2694.5	8.6	2694.5	8.6	5.1
13SM02_91	55.9	0.6128	5.872	0.047	0.3653	0.0029	0.50126	1956.7	7	2009	14	1895.8	7.9	1895.8	7.9	6.0
13SM02_92	62.5	0.376	3.196	0.033	0.2591	0.0024	0.59779	1456.7	7.7	1486	13	1418.7	9.9	1418.7	9.9	4.7
13SM02_93	165.6	1.414	1.907	0.012	0.1824	0.0012	0.36775	1083.9	4.1	1079.9	6.6	1081.3	9.5	1079.9	6.6	0.4
13SM02_94	82.3	1.396	2.020	0.020	0.1945	0.0020	0.64842	1121.7	6.6	1145	11	1083	11	1145	11	2.1
13SM02_95	48	0.854	2.049	0.024	0.1957	0.0020	0.44825	1131.3	8.2	1152	11	1084	13	1152	11	1.8
13SM02_96	126	1.164	1.998	0.043	0.1896	0.0039	0.94302	1113	15	1118	21	1091	9.6	1118	21	0.4
13SM02_97	46.2	1.472	2.048	0.025	0.1940	0.0017	0.2186	1131.9	8.1	1143.1	9.3	1104	14	1143.1	9.3	1.0
13SM02_98	102.1	1.253	4.859	0.047	0.3208	0.0031	0.63489	1795.5	8.2	1793	15	1794.8	7.7	1794.8	7.7	0.1
13SM02_99	109	1.204	1.978	0.015	0.1890	0.0016	0.30792	1107.6	5.2	1116	8.4	1089.7	8.3	1116	8.4	0.8
13SM02_100	38.9	0.682	2.001	0.035	0.1919	0.0032	0.56245	1117	11	1131	17	1105	18	1131	17	1.3
13SM02_101	97.8	1.024	1.937	0.019	0.1859	0.0016	0.28381	1093.5	6.6	1100.3	8.6	1083	12	1100.3	8.6	0.6
13SM02_102	69.3	0.739	5.387	0.036	0.3495	0.0028	0.34898	1882.4	5.7	1932	13	1821.3	8.1	1821.3	8.1	6.1
13SM02_103	186	1.077	3.447	0.022	0.2708	0.0020	0.49358	1514.9	4.9	1545	10	1467.4	8.2	1467.4	8.2	5.3
13SM02_104	85.2	0.896	2.890	0.032	0.2475	0.0021	0.34151	1378.8	8.5	1425	11	1303	13	1303	13	9.4
13SM02_105	89	1.34	2.038	0.032	0.1984	0.0023	0.57272	1127	11	1167	12	1075	15	1167	12	3.5

13SM02_106	71.4	1.456	2.006	0.024	0.1926	0.0019	0.50264	1116.8	7.9	1135	10	1094	15	1135	10	1.6
13SM02_107	125.6	1.362	1.969	0.021	0.1876	0.0021	0.52596	1105.4	7.4	1108	12	1098	12	1108	12	0.2
13SM02_108	308	1.502	2.027	0.015	0.1917	0.0014	0.57223	1124.4	4.9	1131.3	7.4	1108.9	6.7	1131.3	7.4	0.6
13SM02_109	56.1	0.6881	5.343	0.047	0.3439	0.0031	0.68895	1875.3	7.5	1905	15	1842	6.2	1842	6.2	3.4
13SM02_110	116	0.963	5.454	0.040	0.3521	0.0027	0.59644	1893	6.3	1945	13	1835.2	7.4	1835.2	7.4	6.0
13SM02_111	68.8	0.841	4.792	0.057	0.3177	0.0043	0.82059	1783	10	1780	21	1763.1	7.7	1763.1	7.7	1.0
13SM02_112	82.3	0.867	1.974	0.019	0.1892	0.0017	0.466	1106.4	6.6	1116.9	9.4	1064	12	1116.9	9.4	0.9
13SM02_113	118.4	1.488	4.505	0.045	0.3106	0.0037	0.92349	1731.2	8.3	1743	18	1713.4	6.9	1713.4	6.9	1.7
13SM02_114	115.4	0.994	0.536	0.009	0.0700	0.0007	0.073928	435.5	5.9	436.3	4.4	422	26	436.3	4.4	0.2
13SM02_115	30.5	0.966	1.944	0.030	0.1902	0.0025	0.60658	1098	10	1122	13	1071	16	1122	13	2.2
13SM02_116	62.9	0.7457	20.360	0.200	0.6421	0.0069	0.76235	3108	9.3	3196	27	3058.5	6.6	3058.5	6.6	4.5
13SM02_117	37.7	0.68	5.599	0.044	0.3482	0.0026	0.34253	1915.5	6.7	1926	12	1907.1	9	1907.1	9	1.0
13SM02_118	47.3	0.7297	5.869	0.056	0.3600	0.0036	0.6546	1957.2	8.5	1982	17	1941.9	9.5	1941.9	9.5	2.1
13SM02_119	113.7	0.99	7.196	0.050	0.4033	0.0029	0.57037	2135.6	6.2	2184	13	2091.1	6	2091.1	6	4.4
13SM02_120	60.5	1.414	5.912	0.051	0.3649	0.0029	0.50826	1963.5	7.3	2005	14	1913.1	8.6	1913.1	8.6	4.8
13SM03_1	8	0.033	2.268	0.017	0.2086	0.0015	0.60563	1221.2	8.1	1202	5.3	1165.5	6.6	1165.5	5.3	1.6
13SM03_2	6.1	0.037	1.855	0.014	0.1821	0.0012	0.51544	1078.6	6.7	1066.5	4.8	1032.4	9.5	1066.5	4.8	1.1
13SM03_3	1.8	0.045	1.887	0.020	0.1850	0.0015	0.17227	1094.1	8.2	1076.2	7.1	1037	11	1076.2	7.1	1.6
13SM03_4	1.9	0.025	5.077	0.041	0.3485	0.0031	0.36701	1931	15	1831.8	6.9	1728	11	1728	11	6.0
13SM03_5	1.2	0.025	7.061	0.066	0.4040	0.0039	0.69602	2187	18	2118.5	8.3	2038.4	8	2038.4	8	3.9
13SM03_7	6.8	0.13	0.579	0.006	0.0749	0.0007	0.35004	465.8	4.4	463.4	3.6	448	14	463.4	3.6	0.5
13SM03_8	22	0.037	2.540	0.017	0.2251	0.0019	0.84014	1309	10	1283.4	5	1232.3	7.9	1232.3	7.9	4.1
13SM03_9	2.4	0.032	2.265	0.014	0.2062	0.0014	0.57804	1208.5	7.2	1201.4	4.5	1169.6	6.6	1169.6	4.5	0.6
13SM03_10	3.4	0.052	1.752	0.015	0.1756	0.0016	0.57722	1043.7	8.8	1027.7	5.7	995	10	1027.7	5.7	1.5
13SM03_11	7.3	0.053	2.130	0.059	0.1962	0.0020	0.054857	1155	11	1156	18	1150	43	1156	18	0.1
13SM03_12	5.2	0.047	4.673	0.081	0.3085	0.0043	0.83952	1733	21	1761	15	1797	12	1797	12	2.0
13SM03_13	2	0.038	13.160	0.240	0.5206	0.0094	0.96979	2700	40	2689	18	2672.7	9.8	2672.7	9.8	0.6
13SM03_14	0.83	0.31	0.428	0.011	0.0577	0.0010	0.47346	361.3	6.3	362.6	7.8	358	35	362.6	7.8	0.4

13SM03_15	3.4	1.1	0.100	0.003	0.0150	0.0002	0.15452	95.8	1.5	96.6	2.6	190	32	96.6	2.6	0.8
13SM03_16	1.7	0.034	4.822	0.068	0.3260	0.0035	0.37922	1818	17	1789	12	1763	13	1763	13	1.5
13SM03_17	8.4	0.014	13.951	0.082	0.5504	0.0042	0.63483	2827	18	2746.1	5.6	2686.8	5.8	2686.8	5.8	2.2
13SM03_18	3.1	0.093	0.818	0.010	0.0989	0.0009	0.26054	608	5.3	606.5	5.5	592	18	606.5	5.5	0.2
13SM03_19	40	0.17	0.381	0.004	0.0518	0.0005	0.5434	325.7	2.9	327.5	2.8	329	11	327.5	2.8	0.6
13SM03_20	11	0.041	2.026	0.016	0.1940	0.0015	0.6988	1143.2	8.1	1124.1	5.5	1077.2	7.3	1124.1	5.5	1.7
13SM03_22	1.3	0.025	7.021	0.059	0.3926	0.0039	0.45159	2134	18	2114.6	7.3	2085	10	2085	10	1.4
13SM03_23	4.7	0.034	4.245	0.035	0.3045	0.0031	0.73074	1713	16	1683.3	6.9	1645.6	6.1	1645.6	6.1	2.3
13SM03_24	1.3	0.11	2.424	0.040	0.1960	0.0043	0.76813	1153	23	1249	12	1415	17	1415	17	11.7
13SM03_24	0.85	0.076	2.928	0.057	0.2417	0.0045	0.3887	1395	23	1389	15	1375	25	1375	25	1.0
13SM03_25	1.2	0.029	3.289	0.025	0.2649	0.0020	0.61795	1515	10	1479.1	6.2	1422.9	7.9	1422.9	7.9	3.9
13SM03_26	3	0.038	2.904	0.026	0.2392	0.0021	0.39619	1384	11	1383.4	6.5	1375	11	1375	11	0.6
13SM03_27	17	0.045	5.882	0.093	0.3382	0.0049	0.86169	1887	24	1957	14	2038.2	7.3	2038.2	7.3	4.0
13SM03_28	1.2	0.043	2.670	0.029	0.2279	0.0022	0.4826	1323	11	1319.6	7.9	1303	12	1303	12	1.3
13SM03_29	13	0.085	0.819	0.009	0.0992	0.0008	0.51738	609.6	4.9	607.5	4.8	598	11	607.5	4.8	0.3
13SM03_30	0.95	0.42	0.276	0.009	0.0388	0.0006	0.095885	245.5	3.8	247	6.9	337	40	247	6.9	0.6
13SM03_31	8.3	0.057	2.017	0.018	0.1922	0.0021	0.51663	1133	11	1121.7	6.1	1085.4	9.7	1121.7	6.1	1.0
13SM03_32	8.8	0.068	2.243	0.024	0.1802	0.0022	0.76814	1070	12	1194.3	7.5	1439	12	1194.3	7.5	11.6
13SM03_33	10	0.048	4.090	0.028	0.2825	0.0037	0.56722	1604	19	1652.7	5.6	1720	18	1720	18	3.9
13SM03_34	14	0.1	0.850	0.011	0.1030	0.0010	0.50502	631.9	6	624.2	5.8	596	13	624.2	5.8	1.2
13SM03_35	2.8	0.066	3.896	0.068	0.2739	0.0047	0.92656	1560	24	1611	14	1682.7	9	1682.7	9	4.3
13SM03_36	0.32	0.14	0.714	0.018	0.0891	0.0011	0.32508	549.9	6.6	547	11	516	31	547	11	0.5
13SM03_37	42	0.71	0.097	0.001	0.0148	0.0002	0.17567	94.45	0.98	93.9	1.2	130	18	93.9	1.2	0.6
13SM03_38	8	0.027	3.194	0.020	0.2594	0.0018	0.65832	1486.6	9.2	1455.4	4.8	1406.2	6.2	1406.2	6.2	3.5
13SM03_39	37	0.12	0.563	0.007	0.0733	0.0006	0.4696	455.7	3.9	453.5	4.3	459	16	453.5	4.3	0.5
13SM03_40	7.8	0.12	1.755	0.042	0.1648	0.0033	0.90444	983	18	1029	15	1127	16	1029	15	4.7
13SM03_42	42	0.1	2.653	0.058	0.2136	0.0046	0.89084	1248	25	1314	16	1434	10	1434	10	8.4
13SM03_43	0.72	0.064	2.742	0.035	0.2301	0.0034	0.76271	1335	18	1339.5	9.4	1347.8	8.7	1347.8	8.7	0.6
13SM03_44	11	0.16	0.488	0.007	0.0631	0.0006	0.32241	394.6	3.9	403.8	4.5	459	18	403.8	4.5	2.3
13SM03_45	2.2	0.016	12.099	0.082	0.5021	0.0038	0.31097	2622	16	2611.8	6.4	2600.1	7.8	2600.1	7.8	0.4

13SM03_46	4.8	0.036	3.767	0.031	0.2722	0.0027	0.75027	1552	14	1585.6	6.6	1637	11	1637	11	3.1
13SM03_46	6.5	0.026	4.144	0.039	0.2931	0.0021	0.33205	1657	10	1662.8	7.7	1664	13	1664	13	0.1
13SM03_47	19	0.076	2.158	0.030	0.1784	0.0025	0.93362	1061	13	1167.1	9.7	1366.1	8.7	1167.1	9.7	10.0
13SM03_47	3.6	0.067	2.412	0.038	0.2001	0.0027	0.79273	1176	14	1248	11	1373.6	9.3	1373.6	9.3	9.1
13SM03_48	3.7	0.029	2.091	0.013	0.2029	0.0012	0.28436	1191	6.4	1145.6	4.2	1064.7	8.4	1145.6	4.2	3.8
13SM03_49	2.9	0.037	3.052	0.031	0.2469	0.0021	0.50089	1422	11	1420.3	7.6	1422.3	9.6	1422.3	9.6	0.1
13SM03_50	8.3	0.081	1.900	0.027	0.1787	0.0026	0.64642	1060	14	1080.8	9.4	1121	15	1080.8	9.4	2.0
13SM03_51	2.7	0.057	2.843	0.044	0.2324	0.0030	0.91831	1347	16	1366	12	1393	12	1393	12	1.9
13SM03_52	1.3	0.13	0.461	0.005	0.0611	0.0005	0.26008	382.1	2.9	386	3.7	397	15	386	3.7	1.0
13SM03_53	0.85	0.19	0.460	0.010	0.0626	0.0008	0.1519	391.4	4.5	384.8	7.4	350	31	384.8	7.4	1.7
13SM03_54	21	1.3	0.164	0.018	0.0154	0.0003	0.81681	98.5	2	152	15	1170	190	DISC	DISC	54.3
13SM03_55	0.37	0.042	2.158	0.023	0.2030	0.0017	0.60552	1191.4	9.2	1168.3	7.2	1139	12	1168.3	7.2	1.9
13SM03_56	0.7	0.057	1.744	0.023	0.1765	0.0017	0.49739	1047.8	9.5	1025.3	8.6	974	14	1025.3	8.6	2.1
13SM03_57	0.56	0.058	2.123	0.030	0.2013	0.0023	0.45179	1182	12	1155.5	9.9	1112	16	1155.5	9.9	2.2
13SM03_58	0.26	0.033	4.960	0.065	0.3426	0.0038	0.12887	1899	18	1811	11	1719	15	1719	15	5.4
13SM03_59	4	0.084	2.024	0.028	0.1913	0.0031	0.77044	1128	17	1122.7	9.3	1120	12	1122.7	9.3	0.5
13SM03_60	3.2	0.019	14.630	0.180	0.5375	0.0053	0.87274	2772	22	2791	12	2810	10	2810	10	0.7
13SM03_61	0.038	0.046	5.740	0.110	0.3601	0.0060	0.25211	1982	29	1939	17	1880	24	1880	24	3.1
13SM03_62	19	0.024	3.478	0.027	0.2788	0.0019	0.54529	1585.1	9.4	1521.8	6.2	1449.5	8.7	1449.5	8.7	5.0
13SM03_63	0.94	0.069	1.745	0.033	0.1726	0.0021	0.3435	1026	12	1026	12	1018	19	1026	12	0.0
13SM03_64	2	0.035	2.059	0.015	0.1957	0.0013	0.41377	1152.2	7.2	1135	4.8	1099.1	9.1	1135	4.8	1.5
13SM03_65	4.1	0.34	0.303	0.009	0.0425	0.0007	0.11834	268.4	4.2	268.6	7.3	302	34	268.6	7.3	0.1
13SM03_66	3.4	0.067	0.853	0.007	0.1026	0.0007	0.34551	629.7	4.1	626.2	3.6	612	12	626.2	3.6	0.6
13SM03_67	2.4	0.16	0.556	0.015	0.0712	0.0008	0.53663	443.2	5	447.9	9.1	472	31	447.9	9.1	1.1
13SM03_68	18	0.28	0.546	0.013	0.0706	0.0014	0.67286	439.8	8.5	442	8.9	453	21	442	8.9	0.5
13SM03_69	2.5	0.039	2.007	0.018	0.1931	0.0015	0.33273	1139	7.9	1117.4	6	1071	13	1117.4	6	1.9
13SM03_70	4.1	0.052	2.576	0.058	0.1909	0.0018	0.33572	1125.9	9.7	1294	17	1579	43	1579	43	18.0
13SM03_71	1.6	0.03	3.540	0.026	0.2725	0.0023	0.60272	1553	12	1536	5.8	1515.7	6.9	1515.7	6.9	1.3
13SM03_72	7.5	0.033	4.474	0.042	0.2965	0.0030	0.76972	1676	15	1725.5	7.9	1784.1	7.8	1784.1	7.8	3.3
13SM03_73	1.6	0.052	2.617	0.030	0.2271	0.0027	0.22923	1319	14	1304.8	8.2	1275	11	1275	11	2.3

13SM03_74	2.1	0.032	4.309	0.031	0.2981	0.0029	0.49492	1682	14	1694.9	6	1704	11	1704	11	0.5
13SM03_75	1.6	0.14	1.389	0.053	0.1362	0.0026	0.71344	823	15	880	22	996	43	880	22	6.9
13SM03_76	5	0.04	4.157	0.058	0.2730	0.0029	0.25986	1556	15	1665	11	1794	21	1794	21	7.2
13SM03_77	7.6	0.0099	14.272	0.055	0.5663	0.0032	0.45233	2893	13	2767.9	3.7	2674.2	4.7	2674.2	4.7	3.5
13SM03_78	8.6	0.051	2.214	0.023	0.1995	0.0021	0.52978	1174	11	1186.1	7.4	1212.3	8	1186.1	7.4	1.0
13SM03_79	4	0.041	2.004	0.021	0.1939	0.0015	0.20096	1142.4	8.3	1116.4	7	1070	14	1116.4	7	2.3
13SM03_80	5.7	0.43	0.747	0.023	0.0554	0.0013	0.56655	347.4	7.8	566	13	1579	33	DISC	DISC	62.9
13SM03_81	7.1	0.025	4.995	0.041	0.3324	0.0026	0.66737	1850	13	1818	7	1777.9	8.5	1777.9	8.5	2.3
13SM03_82	8.9	0.031	2.822	0.020	0.2372	0.0017	0.57722	1372	9	1362	5.1	1336.2	6.9	1336.2	6.9	1.9
13SM03_84	1.5	0.043	2.080	0.024	0.1973	0.0017	0.33815	1160.7	9	1143	7.8	1108	12	1143	7.8	1.5
13SM03_85	3.6	0.037	2.033	0.018	0.1960	0.0015	0.48213	1153.7	7.9	1126.4	5.9	1081.4	9.1	1126.4	5.9	2.4
13SM03_86	9.3	0.028	3.244	0.024	0.2595	0.0019	0.68904	1487.1	9.7	1467.4	5.8	1448	7	1448	7	1.3
13SM03_87	4.8	0.024	3.498	0.021	0.2714	0.0018	0.45464	1547.9	9.1	1526.5	4.8	1497.4	7.2	1497.4	7.2	1.9
13SM03_88	6	0.8	0.108	0.003	0.0153	0.0002	0.18312	97.7	1.2	104	2.5	268	34	104	2.5	6.4
13SM03_89	4	0.017	5.594	0.032	0.3572	0.0022	0.47684	1969	10	1914.9	4.9	1847.8	7.4	1847.8	7.4	3.6
13SM03_90	8.3	0.043	2.039	0.020	0.1933	0.0016	0.60658	1139.2	8.6	1129.2	6.7	1108	11	1129.2	6.7	0.9
13SM03_91	4	0.018	4.668	0.025	0.3244	0.0019	0.43628	1811.2	9.2	1761.3	4.4	1696.5	5.3	1696.5	5.3	3.8
13SM03_92	1.4	0.035	3.363	0.038	0.2585	0.0023	0.53313	1482	12	1495.2	8.9	1517	12	1517	12	1.4
13SM03_93	2.7	0.017	12.510	0.110	0.4994	0.0042	0.72256	2611	18	2643.3	7.9	2668.3	7.4	2668.3	7.4	0.9
13SM03_94	9.5	0.026	12.440	0.140	0.4862	0.0060	0.91589	2553	26	2637	11	2704.9	4.2	2704.9	4.2	2.5
13SM03_95	8	0.03	3.468	0.026	0.2688	0.0022	0.65963	1534	11	1519.7	5.9	1501.7	6.8	1501.7	6.8	1.2
13SM03_96	3.7	0.038	1.950	0.024	0.1895	0.0014	0.036869	1119.6	7.5	1097.8	8.3	1053	18	1097.8	8.3	1.9
13SM03_97	2.4	0.066	2.129	0.033	0.2012	0.0027	0.54732	1182	14	1159	10	1107	17	1159	10	1.9
13SM03_98	1.4	0.043	2.117	0.021	0.2015	0.0018	0.23432	1183.1	9.5	1154	7	1099	13	1154	7	2.5
13SM03_99	1.1	0.011	14.351	0.086	0.5625	0.0035	0.57469	2877	15	2774.5	5.7	2701.9	5.1	2701.9	5.1	2.7
13SM03_100	0.9	0.038	3.282	0.029	0.2611	0.0026	0.59317	1495	13	1477.2	7	1448.7	9.5	1448.7	9.5	2.0
13SM03_101	2.8	0.046	1.797	0.015	0.1779	0.0014	0.26329	1055.6	7.9	1044.1	5.4	1020.1	9.9	1044.1	5.4	1.1
13SM03_102	3.1	0.08	1.812	0.024	0.1772	0.0025	0.87127	1052	14	1049.1	8.8	1032.2	8.6	1049.1	8.8	0.3
13SM03_103	1.5	0.052	1.875	0.021	0.1814	0.0017	0.3918	1074.5	9.4	1072.7	7.2	1072	13	1072.7	7.2	0.2
13SM03_104	0.94	0.13	0.506	0.005	0.0668	0.0006	0.48207	417	3.5	416.1	3.4	421	14	416.1	3.4	0.2

13SM03_105	1.4	0.32	0.617	0.024	0.0764	0.0018	0.90074	475	11	487	15	531	36	487	15	2.5
13SM03_106	4.6	0.048	1.892	0.018	0.1866	0.0017	0.50854	1102.7	9	1077.9	6.2	1039	12	1077.9	6.2	2.2
13SM03_107	2.1	0.13	0.537	0.007	0.0708	0.0007	0.10344	440.7	4.1	436.7	5	420	19	436.7	5	0.9
13SM03_108	0.42	0.025	4.286	0.030	0.3082	0.0024	0.4864	1732	12	1690.3	5.8	1636.9	7.7	1636.9	7.7	3.3
13SM03_109	0.57	0.063	2.044	0.047	0.1925	0.0023	0.1385	1134	13	1128	16	1108	29	1128	16	0.5
13SM03_110	0.94	0.057	2.321	0.026	0.1978	0.0023	0.56048	1163	12	1218	8	1331	10	1331	10	8.5
13SM03_111	6.9	0.017	12.740	0.150	0.5373	0.0051	0.81914	2771	21	2661	11	2585.3	7.6	2585.3	7.6	2.9
13SM03_112	4.2	0.013	17.460	0.120	0.6061	0.0050	0.67421	3054	20	2959.9	6.7	2893	5.7	2893	5.7	2.3
13SM03_113	9.7	0.035	2.907	0.024	0.2443	0.0021	0.50048	1409	11	1384.3	6.4	1350.1	8.8	1350.1	8.8	2.5
13SM03_114	32	0.03	10.010	0.110	0.4182	0.0052	0.87904	2252	24	2437	11	2594.4	5.4	2594.4	5.4	6.1
13SM03_114	13	0.022	12.300	0.210	0.4969	0.0054	0.50084	2600	23	2627	16	2651	24	2651	24	0.9
13SM03_115	3.7	0.042	3.111	0.029	0.2484	0.0020	0.92993	1430	10	1432.9	8.1	1439	10	1439	10	0.4
13SM03_116	1.1	0.034	1.986	0.018	0.1936	0.0012	0.18301	1141	6.7	1111.1	6	1057	13	1111.1	6	2.6
13SM03_117	16	0.051	3.360	0.035	0.2685	0.0034	0.96181	1533	17	1494.5	8.5	1444.7	8.7	1444.7	8.7	3.4
13SM03_118	0.74	0.077	1.666	0.036	0.1727	0.0023	0.17226	1027	13	996	14	930	29	996	14	3.0
13SM03_119	1.4	0.025	4.345	0.025	0.3096	0.0025	0.52016	1739	12	1702.4	4.8	1651.1	8.2	1651.1	8.2	3.1
13SM03_120	1.1	0.04	4.298	0.087	0.3046	0.0036	0.85934	1714	18	1690	17	1660	22	1660	22	1.8
13SM04_1	8.6	0.06	1.527	0.015	0.1582	0.0015	0.37167	946.6	8.5	941.2	5.9	944	11	941.2	5.9	0.6
13SM04_2	4.8	0.023	4.907	0.040	0.3261	0.0026	0.50385	1819	12	1803.2	6.8	1790.5	8.4	1790.5	8.4	0.7
13SM04_3	2.7	0.045	1.818	0.025	0.1812	0.0015	0.0035765	1073.5	8	1051.3	9	1014	18	1051.3	9	2.1
13SM04_4	3.3	0.022	5.850	0.062	0.3667	0.0029	0.29245	2014	14	1954.5	9	1900	12	1900	12	2.9
13SM04_5	0.2	0.019	14.140	0.110	0.5558	0.0057	0.29517	2849	24	2758.5	7.5	2703	11	2703	11	2.1
13SM04_6	2.2	0.026	3.289	0.020	0.2668	0.0018	0.56447	1524.2	9.2	1478.2	4.8	1414	7.7	1414	7.7	4.5
13SM04_7	0.99	0.14	2.280	0.061	0.1557	0.0034	0.44798	933	19	1204	19	1746	38	DISC	DISC	31.0
13SM04_8	3.9	0.065	2.468	0.061	0.2112	0.0028	0.69401	1235	15	1266	19	1315	35	1315	35	3.7
13SM04_8	0.29	0.059	4.340	0.140	0.2921	0.0049	0.83252	1652	24	1697	28	1781	24	1781	24	4.7
13SM04_9	17	0.078	1.136	0.013	0.1279	0.0013	0.68085	776	7.5	770.2	6.4	771	10	770.2	6.4	0.7
13SM04_10	0.56	0.022	15.200	0.120	0.5542	0.0066	0.6473	2845	28	2827.1	7.8	2816	10	2816	10	0.4

13SM04_11	7.9	0.14	0.401	0.003	0.0547	0.0004	0.34967	343.3	2.5	342.5	2.2	364	11	342.5	2.2	0.2
13SM04_12	1.7	0.032	3.539	0.039	0.2646	0.0022	0.40288	1513	11	1536.4	8.9	1553	12	1553	12	1.1
13SM04_13	1.6	0.022	4.975	0.033	0.3307	0.0024	0.49274	1842	12	1814.9	5.5	1789.4	7	1789.4	7	1.4
13SM04_14	3.5	0.56	0.188	0.005	0.0273	0.0004	0.34114	173.6	2.6	174.8	4.2	229	27	174.8	4.2	0.7
13SM04_15	6.7	0.029	4.380	0.033	0.3059	0.0026	0.59683	1720	13	1709	6.1	1697.4	7.3	1697.4	7.3	0.7
13SM04_16	1.7	0.12	0.555	0.007	0.0728	0.0007	0.52814	453.2	4	448.1	4.4	425	16	448.1	4.4	1.1
13SM04_17	1.4	0.11	0.843	0.011	0.1020	0.0011	0.19686	625.8	6.5	620.7	5.9	592	23	620.7	5.9	0.8
13SM04_18	5.7	0.043	1.975	0.021	0.1902	0.0015	0.33816	1122.2	8.4	1106.6	7.3	1067	11	1106.6	7.3	1.4
13SM04_19	1.9	0.043	3.233	0.035	0.2567	0.0029	0.68381	1472	15	1464.6	8.5	1465.5	9.5	1465.5	9.5	0.1
13SM04_20	1.4	0.021	5.095	0.027	0.3379	0.0024	0.34953	1876	12	1836.1	4.6	1788.6	7.2	1788.6	7.2	2.7
13SM04_21	27	0.67	0.104	0.002	0.0154	0.0002	0.23264	98.2	1	100.1	1.7	176	24	100.1	1.7	1.9
13SM04_22	1.9	0.011	16.555	0.082	0.6052	0.0039	0.55961	3050	16	2909.2	4.8	2811.6	4.5	2811.6	4.5	3.5
13SM04_23	11	0.038	1.874	0.015	0.1862	0.0014	0.53893	1101.6	7.2	1071.7	5.3	1014.6	6.4	1071.7	5.3	2.7
13SM04_24	0.54	0.067	1.963	0.038	0.1847	0.0023	0.044338	1092	13	1102	13	1118	33	1102	13	0.9
13SM04_25	4.6	0.041	2.089	0.022	0.2024	0.0016	0.17905	1188.2	8.8	1145.8	7.5	1068	18	1145.8	7.5	3.6
13SM04_26	2.8	0.023	7.273	0.054	0.4065	0.0037	0.94428	2199	17	2145.1	6.6	2098.9	7.1	2098.9	7.1	2.2
13SM04_27	4.1	0.038	1.879	0.012	0.1861	0.0013	0.33959	1100.3	7.3	1073.6	4.4	1020.9	8.3	1073.6	4.4	2.4
13SM04_28	1	0.032	2.359	0.027	0.2141	0.0014	0.17991	1250.3	7.6	1227.9	7.2	1193	12	1193	7.2	1.8
13SM04_29	1.2	0.039	5.128	0.062	0.3184	0.0039	0.70581	1782	19	1841.8	9.9	1914.5	8.7	1914.5	8.7	3.8
13SM04_30	1.6	0.041	2.103	0.022	0.2006	0.0016	0.38438	1178.2	8.8	1151.2	6.7	1109	11	1151.2	6.7	2.3
13SM04_31	7.4	0.41	0.192	0.004	0.0284	0.0003	0.38427	180.6	2.1	178.1	3.2	192	22	178.1	3.2	1.4
13SM04_32	15	0.47	0.329	0.018	0.0365	0.0007	0.0039362	231.1	4.3	288	14	750	120	288	14	24.6
13SM04_33	7.4	0.41	0.182	0.004	0.0272	0.0003	0.019998	173	1.9	170.9	3.8	207	28	170.9	3.8	1.2
13SM04_34	2	0.037	3.076	0.026	0.2537	0.0024	0.31216	1459	12	1426.4	6.6	1387	10	1387	10	2.8
13SM04_35	1.6	0.062	2.480	0.048	0.2244	0.0032	0.30549	1305	17	1265	14	1198	24	1198	14	3.1
13SM04_36	5.6	0.5	0.109	0.001	0.0163	0.0001	0.0086192	104.04	0.83	105.1	1.3	166	19	105.1	1.3	1.0
13SM04_37	8.1	0.029	3.190	0.024	0.2628	0.0020	0.42519	1504	10	1454.5	5.8	1382	12	1382	12	5.2
13SM04_38	1	0.049	2.107	0.018	0.1977	0.0019	0.36742	1163	10	1150.8	6	1141	12	1150.8	6	1.0
13SM04_39	5.9	0.068	2.445	0.025	0.2176	0.0028	0.91932	1269	15	1255.5	7.3	1238.6	9.5	1238.6	9.5	1.4
13SM04_40	1.3	0.016	15.460	0.120	0.5664	0.0051	0.62835	2892	21	2843.6	7.6	2814.6	7.2	2814.6	7.2	1.0

13SM04_41	4.1	0.058	3.139	0.035	0.2517	0.0036	0.33168	1447	18	1442	8.6	1450	16	1450	16	0.6
13SM04_42	2.4	0.19	0.700	0.017	0.0889	0.0015	0.075563	549	8.7	538	10	491	43	538	10	2.0
13SM04_43	2.6	0.043	1.819	0.024	0.1771	0.0014	0.3111	1051	7.6	1053	8.6	1053	19	1053	8.6	0.2
13SM04_44	1.5	0.026	5.676	0.062	0.3553	0.0032	0.36184	1959	15	1926.9	9.4	1894	12	1894	12	1.7
13SM04_45	8.1	0.042	5.407	0.083	0.3322	0.0046	0.71573	1849	22	1886	13	1926	17	1926	17	2.1
13SM04_45	6.9	0.021	6.152	0.048	0.3792	0.0029	0.54042	2073	13	1997.3	6.8	1918	10	1918	10	4.1
13SM04_46	5.9	0.36	0.192	0.003	0.0280	0.0003	0.12741	178.2	1.7	178.6	2.9	211	23	178.6	2.9	0.2
13SM04_47	23	0.56	0.102	0.002	0.0152	0.0001	0.013003	97.17	0.78	98.9	1.4	172	23	98.9	1.4	1.8
13SM04_48	9.1	0.22	0.299	0.006	0.0400	0.0004	0.58457	253.1	2.1	265.7	4.7	372	25	265.7	4.7	5.0
13SM04_49	5	0.027	4.983	0.045	0.3356	0.0031	0.57403	1865	15	1816.9	7.4	1764	7.4	1764	7.4	3.0
13SM04_50	3.4	0.053	2.117	0.027	0.2004	0.0021	0.81237	1177	11	1153.7	8.9	1117.5	9.5	1153.7	8.9	2.0
13SM04_51	3	0.29	0.591	0.017	0.0744	0.0016	0.12406	462.5	9.4	471	11	534	47	471	11	1.8
13SM04_52	6.4	0.028	2.809	0.018	0.2394	0.0016	0.27455	1384.6	8.5	1358.5	4.8	1316	11	1316	11	3.2
13SM04_53	3	0.12	0.568	0.006	0.0728	0.0006	0.08498	453	3.8	456.8	4.2	475	20	456.8	4.2	0.8
13SM04_54	2.9	0.062	2.013	0.025	0.1899	0.0022	0.52345	1120	12	1120.3	8.5	1117	11	1120.3	8.5	0.0
13SM04_55	0.37	0.02	16.550	0.470	0.5846	0.0067	0.86012	2970	28	2902	28	2864	31	2864	31	1.3
13SM04_56	37	0.92	0.098	0.002	0.0151	0.0002	0.46901	96.8	1.3	95.1	2	118	23	95.1	2	1.8
13SM04_57	7.9	0.047	2.052	0.027	0.1970	0.0018	0.36525	1159	9.4	1132.3	9	1084	11	1132.3	9	2.3
13SM04_58	2.3	0.022	5.174	0.036	0.3349	0.0024	0.81012	1864	12	1848	5.9	1830.2	4.8	1830.2	4.8	1.0
13SM04_59	1.7	0.04	1.965	0.018	0.1873	0.0014	0.4064	1106.5	7.8	1104.1	6.3	1093	11	1104.1	6.3	0.2
13SM04_60	14	0.12	0.750	0.015	0.0921	0.0010	0.2871	567.7	5.8	567.7	8.8	567	21	567.7	8.8	0.0
13SM04_61	1.1	0.072	1.723	0.024	0.1715	0.0020	0.87324	1020	11	1016.4	9.1	1012	13	1016.4	9.1	0.4
13SM04_62	9.6	0.04	4.475	0.040	0.3088	0.0032	0.93973	1734	16	1726	7.5	1713.1	6.9	1713.1	6.9	0.8
13SM04_63	11	0.068	2.997	0.064	0.2499	0.0042	0.11218	1437	22	1405	16	1350	31	1350	31	4.1
13SM04_64	0.68	0.044	4.138	0.046	0.2945	0.0036	0.84051	1663	18	1661.1	9.3	1647.4	8.3	1647.4	8.3	0.8
13SM04_65	6.5	0.019	4.449	0.027	0.3168	0.0018	0.58559	1774.1	9	1721.8	4.9	1655.9	6.3	1655.9	6.3	4.0
13SM04_66	0.94	0.056	2.787	0.037	0.2340	0.0031	0.48506	1355	16	1351	10	1353	15	1353	15	0.1
13SM04_67	2.3	0.027	2.258	0.018	0.2074	0.0011	0.50201	1214.9	6	1199.9	5.6	1168.6	8.5	1199.9	5.6	1.2
13SM04_68	1.7	0.034	3.063	0.021	0.2551	0.0022	0.59372	1465	11	1423.9	5.3	1369.5	7.4	1369.5	7.4	4.0
13SM04_69	1.8	0.11	0.836	0.022	0.0985	0.0011	0.090433	606.7	6.2	616	12	627	43	616	12	1.5

13SM04_70	0.89	0.033	5.089	0.052	0.3222	0.0033	0.48819	1800	16	1833.7	8.8	1868	11	1868	11	1.8
13SM04_72	12	0.027	3.354	0.025	0.2696	0.0019	0.50913	1538.6	9.9	1493.5	5.9	1433.3	7.5	1433.3	7.5	4.2
13SM04_73	2.9	0.034	4.314	0.037	0.3072	0.0031	0.78109	1727	15	1695.6	7.1	1662	10	1662	10	2.0
13SM04_74	34	0.15	4.270	0.120	0.2986	0.0086	0.98283	1682	44	1682	26	1697.9	8.8	1697.9	8.8	0.9
13SM04_75	3.3	0.017	6.072	0.037	0.3752	0.0023	0.45566	2054	11	1986	5.4	1911.5	6.7	1911.5	6.7	3.9
13SM04_76	0.84	0.056	1.969	0.028	0.1898	0.0021	0.30216	1121	11	1104.1	9.5	1068	19	1104.1	9.5	1.5
13SM04_77	5.9	0.021	5.002	0.028	0.3306	0.0022	0.7242	1841	11	1819.4	4.7	1792.3	4.7	1792.3	4.7	1.5
13SM04_78	4.8	0.037	2.191	0.032	0.2017	0.0015	0.29803	1185.4	8	1177	10	1169	25	1177	10	0.7
13SM04_79	2	0.017	6.456	0.049	0.3835	0.0025	0.61016	2092	12	2039.5	6.7	1984.4	6.7	1984.4	6.7	2.8
13SM04_80	2.1	0.12	0.834	0.017	0.1020	0.0012	0.24544	626.1	7.2	615	9.4	583	27	615	9.4	1.8
13SM04_81	0.97	0.029	3.130	0.023	0.2588	0.0019	0.48972	1483.8	9.7	1439.8	5.7	1376.8	7.9	1376.8	7.9	4.6
13SM04_82	0.84	0.045	3.027	0.049	0.2535	0.0029	0.31508	1456	15	1413	12	1361	23	1361	23	3.8
13SM04_83	18	0.12	0.461	0.005	0.0608	0.0005	0.45417	380.2	2.8	384.8	3.7	413	15	384.8	3.7	1.2
13SM04_84	1.1	0.04	1.953	0.025	0.1897	0.0014	0.10436	1119.4	7.8	1098.8	8.4	1052	17	1098.8	8.4	1.8
13SM04_85	1.3	0.037	4.436	0.034	0.3129	0.0036	0.5597	1755	18	1719	6.4	1680	13	1680	13	2.3
13SM04_86	3.8	0.027	4.782	0.049	0.3352	0.0029	0.54169	1863	14	1781	8.7	1679.9	7.6	1679.9	7.6	6.0
13SM04_87	0.18	0.087	0.759	0.007	0.0942	0.0008	0.2306	580.4	4.4	573.1	4.3	546	15	573.1	4.3	1.3
13SM04_88	0.65	0.021	5.182	0.034	0.3169	0.0021	0.5541	1774	10	1850.3	5.4	1924.9	7	1924.9	7	3.9
13SM04_89	4.9	1	0.099	0.003	0.0152	0.0002	0.042922	96.9	1.4	95.4	2.5	175	36	95.4	2.5	1.5
13SM04_90	5.6	0.045	2.047	0.018	0.1935	0.0018	0.77197	1140.4	9.6	1131.8	5.7	1116.9	7.3	1131.8	5.7	0.8
13SM04_91	7.2	0.24	0.195	0.002	0.0281	0.0002	0.29638	178.7	1.2	180.5	1.7	191	15	180.5	1.7	1.0
13SM04_92	4.1	0.023	4.523	0.034	0.3204	0.0023	0.56895	1792	11	1734.9	6.2	1653.3	6.6	1653.3	6.6	4.9
13SM04_93	16	0.96	0.100	0.002	0.0148	0.0002	0.18244	94.8	1.3	96.3	2	168	29	96.3	2	1.6
13SM04_94	1.7	0.13	0.430	0.006	0.0581	0.0005	0.28071	364.3	2.7	363.1	4.1	347	18	363.1	4.1	0.3
13SM04_95	0.35	0.083	2.018	0.041	0.1901	0.0029	0.31728	1122	16	1120	14	1125	23	1120	14	0.2
13SM04_96	3.5	0.12	1.478	0.019	0.1266	0.0019	0.64323	768	11	921.4	7.7	1309	14	921.4	7.7	20.0
13SM04_96	2.4	0.064	2.104	0.070	0.1897	0.0024	0.064072	1120	13	1148	22	1197	55	1148	22	2.5
13SM04_97	9.1	0.034	4.771	0.037	0.3283	0.0037	0.57746	1830	18	1779.4	6.6	1722	11	1722	11	3.3
13SM04_98	32	0.49	0.527	0.007	0.0552	0.0015	0.40565	346.2	9.1	429.6	4.5	930	74	429.6	4.5	24.1
13SM04_99	1.5	0.02	4.900	0.030	0.3371	0.0024	0.41757	1872	11	1801.9	5.1	1718.4	7.1	1718.4	7.1	4.9

13SM04_100	1.6	0.032	3.144	0.029	0.2566	0.0021	0.29501	1472	11	1443	7.1	1399	11	1399	11	3.1
13SM04_101	1.2	0.043	5.679	0.084	0.3432	0.0055	0.76614	1904	27	1928	13	1959	11	1959	11	1.6
13SM04_102	3.3	0.052	1.993	0.023	0.1943	0.0019	0.34771	1144	11	1112.6	7.7	1047	16	1112.6	7.7	2.7
13SM04_103	14	0.039	2.644	0.019	0.2281	0.0020	0.75534	1324	10	1312.8	5.3	1289.4	9.5	1289.4	9.5	1.8
13SM04_104	7.5	0.096	2.470	0.280	0.1911	0.0043	0.97288	1127	23	1221	65	1400	140	1400	140	12.8
13SM04_105	41	0.52	0.108	0.002	0.0162	0.0001	0.14501	103.75	0.87	104.4	1.5	137	18	104.4	1.5	0.6
13SM04_106	9.6	0.26	0.426	0.021	0.0504	0.0007	0.29161	317.1	4	359	14	600	88	359	14	13.2
13SM04_107	3.2	0.024	4.245	0.025	0.2944	0.0021	0.74594	1663	10	1682.6	4.9	1699.7	5.7	1699.7	5.7	1.0
13SM04_108	6.9	0.031	2.295	0.014	0.2091	0.0014	0.49464	1224.1	7.3	1210.5	4.5	1182.3	8.7	1182.3	4.5	1.1
13SM04_109	4.7	0.043	1.916	0.018	0.1853	0.0015	0.57716	1095.8	8	1087.3	6.2	1062	10	1087.3	6.2	0.8
13SM04_110	6.9	0.029	3.282	0.024	0.2588	0.0019	0.53422	1483.8	9.9	1476.6	5.6	1472.3	8.2	1472.3	8.2	0.3
13SM04_111	14	0.13	0.569	0.015	0.0709	0.0007	0.37047	441.2	4	456.2	9.6	532	48	456.2	9.6	3.4
13SM04_112	0.53	0.034	5.591	0.074	0.3515	0.0043	0.35901	1941	20	1914	11	1895	17	1895	17	1.0
13SM04_113	3.3	0.023	4.802	0.028	0.3226	0.0024	0.55352	1802	12	1784.9	5	1762.3	5.7	1762.3	5.7	1.3
13SM04_114	7.2	0.35	0.276	0.007	0.0390	0.0005	0.42456	246.4	3.2	246.8	5.9	270	27	246.8	5.9	0.2
13SM04_115	0.85	0.03	4.259	0.032	0.2653	0.0022	0.7411	1517	11	1685.2	6.3	1895.7	7.3	1895.7	7.3	11.1
13SM04_116	0.24	0.06	1.857	0.030	0.1790	0.0018	0.48585	1061	10	1066	10	1063	17	1066	10	0.5
13SM04_117	3.7	0.062	1.972	0.034	0.1888	0.0022	0.24284	1115	12	1106	11	1089	25	1106	11	0.8
13SM04_118	2.6	0.72	0.103	0.002	0.0152	0.0002	0.086043	97.3	1	99.2	1.8	163	21	99.2	1.8	2.0
13SM04_120	2.4	0.044	1.855	0.018	0.1835	0.0015	0.31097	1085.7	8	1064.9	6.4	1007	15	1064.9	6.4	1.9
13SM05_1	29	0.7	0.103	0.002	0.0155	0.0002	0.40856	98.8	1.1	99.6	2.1	172	32	99.6	2.1	0.8
13SM05_2	25	0.72	0.103	0.002	0.0154	0.0002	0.16812	98.7	1.1	99.3	1.8	158	24	99.3	1.8	0.6
13SM05_4	25	0.63	0.102	0.002	0.0152	0.0002	0.18991	97.05	0.94	98.6	1.6	131	19	98.6	1.6	1.6
13SM05_5	2.4	0.11	1.743	0.042	0.1719	0.0033	0.63607	1025	18	1022	16	1050	22	1022	16	0.3
13SM05_6	2.4	0.023	3.823	0.024	0.2807	0.0018	0.44882	1594.7	9.2	1598	5.3	1602	7.5	1602	7.5	0.2
13SM05_7	1.9	0.048	2.000	0.021	0.1924	0.0018	0.025522	1134.5	9.5	1115.1	7.2	1082	15	1115.1	7.2	1.7
13SM05_8	0.56	0.05	2.667	0.039	0.2292	0.0026	0.25073	1332	14	1318	11	1309	19	1309	19	0.7
13SM05_9	17	0.28	0.184	0.003	0.0271	0.0002	0.24685	172.1	1.3	171.3	2.2	167	20	171.3	2.2	0.5

13SM05_10	8.3	0.97	0.101	0.003	0.0153	0.0002	0.15587	98	1.4	97.6	3	213	43	97.6	3	0.4
13SM05_11	23	0.66	0.103	0.002	0.0150	0.0002	0.14043	95.99	0.96	99.6	2.1	219	38	99.6	2.1	3.8
13SM05_12	25	0.9	0.099	0.002	0.0150	0.0002	0.11288	96.1	1.3	95.5	1.8	164	27	95.5	1.8	0.6
13SM05_13	15	0.76	0.100	0.001	0.0151	0.0002	0.20829	96.6	1.1	96.9	1.3	128	19	96.9	1.3	0.3
13SM05_14	3.2	0.033	3.278	0.025	0.2571	0.0021	0.50827	1476	11	1475.7	5.8	1486.5	8	1486.5	8	0.7
13SM05_15	1.7	0.023	4.580	0.038	0.3210	0.0024	0.58492	1795	12	1745.2	6.8	1687	9.1	1687	9.1	3.4
13SM05_16	13	0.61	0.101	0.002	0.0152	0.0001	0.27533	97.35	0.89	97.3	1.5	130	18	97.3	1.5	0.1
13SM05_17	0.65	0.075	1.731	0.031	0.1687	0.0022	0.44354	1006	12	1019	11	1045	21	1019	11	1.3
13SM05_18	4.7	0.031	2.021	0.011	0.1940	0.0011	0.70335	1143	6	1122.6	3.6	1084.9	5.8	1122.6	3.6	1.8
13SM05_19	25	0.56	0.100	0.001	0.0151	0.0001	0.25301	96.59	0.83	96.5	1.2	106	15	96.5	1.2	0.1
13SM05_20	44	0.57	0.099	0.001	0.0149	0.0001	0.28924	95.53	0.78	95.6	1.2	122	17	95.6	1.2	0.1
13SM05_21	38	0.79	0.097	0.001	0.0147	0.0002	0.22572	94.3	1.2	93.9	1.2	108	20	93.9	1.2	0.4
13SM05_22	5	0.044	1.886	0.017	0.1838	0.0016	0.68856	1087.9	8.6	1076.9	6.2	1045.9	9.5	1076.9	6.2	1.0
13SM05_23	13	0.03	3.954	0.032	0.2919	0.0025	0.70208	1651	13	1624.6	6.5	1594.7	7.1	1594.7	7.1	1.9
13SM05_24	1.5	0.099	0.739	0.008	0.0919	0.0009	0.35238	566.9	5	561.5	4.7	560	13	561.5	4.7	1.0
13SM05_25	9.3	0.017	4.915	0.025	0.3265	0.0018	0.65131	1821.2	8.6	1804.7	4.3	1787.3	5	1787.3	5	1.0
13SM05_26	0.54	0.097	1.826	0.043	0.1813	0.0031	0.29558	1074	17	1057	15	1030	27	1057	15	1.6
13SM05_27	0.52	0.058	1.557	0.019	0.1602	0.0014	0.67008	957.7	8	952.7	7.8	947	18	952.7	7.8	0.5
13SM05_28	9	0.65	0.105	0.001	0.0158	0.0002	0.15385	101.1	1	101.6	1.2	143	22	101.6	1.2	0.5
13SM05_29	4.8	0.015	10.400	0.076	0.4639	0.0033	0.4665	2459	14	2471.5	6.9	2486.7	7.3	2486.7	7.3	0.6
13SM05_30	39	0.63	0.133	0.006	0.0161	0.0002	0.26955	103.1	1.1	126.9	5.1	561	83	126.9	5.1	23.1
13SM05_31	1.2	0.1	1.784	0.043	0.1743	0.0031	0.21947	1037	17	1040	16	1068	35	1040	16	0.3
13SM05_32	4.2	0.062	1.684	0.022	0.1706	0.0018	0.29689	1015.5	9.9	1001.8	8.3	968	16	1001.8	8.3	1.3
13SM05_33	53	0.62	0.104	0.001	0.0155	0.0002	0.11027	99.35	0.96	100.8	1.1	142	17	100.8	1.1	1.5
13SM05_34	5	0.2	1.337	0.037	0.1227	0.0031	0.77173	746	18	862	16	1168	16	862	16	15.5
13SM05_34	0.55	0.056	1.956	0.020	0.1899	0.0020	0.12962	1121	11	1100.4	7	1066	14	1100.4	7	1.8
13SM05_35	31	0.64	0.098	0.002	0.0148	0.0001	0.095105	94.37	0.89	95.1	1.3	152	22	95.1	1.3	0.8
13SM05_36	44	0.6	0.104	0.001	0.0155	0.0001	0.15463	99.23	0.91	100.4	1.3	170	21	100.4	1.3	1.2
13SM05_37	5.9	0.012	18.800	0.130	0.6294	0.0048	0.72727	3147	19	3031.1	6.4	2959.1	4.3	2959.1	4.3	2.4
13SM05_38	32	0.028	3.610	0.024	0.2693	0.0020	0.76912	1537	10	1552.1	5.2	1574.4	4.7	1574.4	4.7	1.4

13SM05_39	5.6	0.63	0.102	0.002	0.0154	0.0002	0.18536	98.61	0.93	98.3	1.5	128	22	98.3	1.5	0.3
13SM05_40	27	0.58	0.100	0.002	0.0151	0.0001	0.32317	96.63	0.85	97.1	1.3	133	16	97.1	1.3	0.5
13SM05_41	4.8	0.032	2.400	0.019	0.2166	0.0015	0.39056	1264	7.9	1242.3	5.6	1203.7	9.1	1203.7	9.1	3.2
13SM05_42	10	0.79	0.096	0.002	0.0146	0.0002	0.23822	93.1	1.1	92.8	1.5	133	21	92.8	1.5	0.3
13SM05_43	9.4	0.78	0.095	0.002	0.0146	0.0002	0.37883	93.1	1.1	92.4	1.6	123	18	92.4	1.6	0.8
13SM05_44	36	0.51	0.103	0.002	0.0148	0.0001	0.052066	94.68	0.7	99.5	1.7	243	30	99.5	1.7	5.1
13SM05_45	28	0.14	0.502	0.007	0.0655	0.0006	0.0714	408.8	3.8	412.7	4.5	438	19	412.7	4.5	1.0
13SM05_46	14	0.53	0.103	0.002	0.0155	0.0001	0.0021615	99.32	0.8	99.1	1.4	133	19	99.1	1.4	0.2
13SM05_47	3.5	0.053	1.661	0.019	0.1686	0.0015	0.3301	1004.1	8.4	993.2	7.3	973	15	993.2	7.3	1.1
13SM05_48	0.84	0.12	1.826	0.039	0.1657	0.0032	0.28501	988	18	1054	14	1201	29	1054	14	6.7
13SM05_48	0.92	0.093	2.158	0.048	0.2013	0.0037	0.32119	1182	20	1169	16	1165	25	1169	16	1.1
13SM05_49	68	0.88	0.115	0.005	0.0161	0.0002	0.66272	102.9	1.5	110.6	4.7	355	75	110.6	4.7	7.5
13SM05_50	4.6	0.78	0.102	0.003	0.0157	0.0002	0.084999	100.6	1.3	98.8	2.4	154	25	98.8	2.4	1.8
13SM05_51	26	0.53	0.098	0.001	0.0147	0.0001	0.091757	93.93	0.75	94.5	1.1	128	17	94.5	1.1	0.6
13SM05_52	14	0.87	0.106	0.003	0.0151	0.0002	0.073742	96.4	1.2	102.2	2.3	242	36	102.2	2.3	6.0
13SM05_53	12	0.59	0.100	0.002	0.0150	0.0001	0.27271	95.9	0.81	96.9	1.4	126	17	96.9	1.4	1.0
13SM05_54	50	0.75	0.099	0.001	0.0152	0.0002	0.37899	97.1	1.1	96	1.3	107	17	96	1.3	1.1
13SM05_56	6.7	0.21	0.257	0.004	0.0344	0.0003	0.16461	217.8	1.6	231.7	3.3	365	26	231.7	3.3	6.4
13SM05_57	0.75	0.065	1.853	0.023	0.1797	0.0020	0.35026	1065	11	1063.9	8.1	1060	17	1063.9	8.1	0.1
13SM05_58	16	0.71	0.097	0.002	0.0150	0.0002	0.15001	95.7	1	94.1	1.4	126	23	94.1	1.4	1.7
13SM05_59	2.1	0.042	7.866	0.077	0.3198	0.0044	0.81579	1788	21	2215.5	8.8	2646.4	6.5	2646.4	6.5	16.3
13SM05_60	2.7	0.12	1.067	0.019	0.1207	0.0017	0.79656	735	10	736.4	9.7	742	18	736.4	9.7	0.2
13SM05_61	1.9	0.047	1.861	0.021	0.1802	0.0014	0.48548	1068.1	7.9	1066.9	7.3	1062	13	1066.9	7.3	0.1
13SM05_62	16	0.036	4.389	0.044	0.3094	0.0034	0.8159	1737	17	1709.6	8.3	1687	7.3	1687	7.3	1.3
13SM05_63	3.6	0.031	2.688	0.025	0.2343	0.0017	0.3673	1357	8.8	1324.7	6.8	1278	11	1278	11	3.7
13SM05_64	13	0.84	0.105	0.002	0.0153	0.0002	0.12875	97.9	1.2	101.3	1.8	220	32	101.3	1.8	3.5
13SM05_66	6	0.79	0.102	0.002	0.0154	0.0002	0.14621	98.2	1.2	98.6	1.6	158	22	98.6	1.6	0.4
13SM05_67	21	1	0.109	0.003	0.0158	0.0002	0.37916	101	1.5	105.3	3.1	289	51	105.3	3.1	4.3
13SM05_68	13	0.92	0.123	0.009	0.0153	0.0002	0.56252	97.8	1.3	116.1	7.2	520	110	116.1	7.2	18.7
13SM05_69	26	0.74	0.101	0.002	0.0156	0.0002	0.27747	99.5	1.1	98.1	1.4	112	21	98.1	1.4	1.4

13SM05_70	4.4	0.041	2.819	0.028	0.2346	0.0023	0.81189	1358	12	1360.1	7.6	1372.2	8.5	1372.2	8.5	0.9
13SM05_71	36	0.66	0.109	0.003	0.0152	0.0002	0.2554	97.38	0.96	105.4	2.4	315	47	105.4	2.4	8.2
13SM05_72	15	0.86	0.098	0.002	0.0149	0.0002	0.078809	95.1	1.2	95.2	1.5	134	21	95.2	1.5	0.1
13SM05_73	8.9	0.62	0.110	0.003	0.0153	0.0002	0.18648	97.58	0.92	105.8	2.3	293	44	105.8	2.3	8.4
13SM05_74	23	0.59	0.100	0.001	0.0155	0.0001	0.14597	99.33	0.9	96.8	1.2	91	18	96.8	1.2	2.5
13SM05_75	2.1	0.038	2.023	0.013	0.1952	0.0014	0.49215	1149.5	7.6	1123	4.3	1086.3	8.8	1123	4.3	2.3
13SM05_76	12	0.14	0.489	0.010	0.0630	0.0006	0.22294	393.6	3.4	404	6.7	460	34	404	6.7	2.6
13SM05_77	12	0.52	0.105	0.001	0.0155	0.0001	0.25838	99.08	0.81	100.9	1.3	142	15	100.9	1.3	1.8
13SM05_78	7.1	0.83	0.102	0.002	0.0152	0.0002	0.35323	97.2	1.2	99.1	1.7	183	23	99.1	1.7	2.0
13SM05_80	14	0.71	0.105	0.002	0.0157	0.0002	0.23586	100.6	1.1	101.3	1.7	143	29	101.3	1.7	0.7
13SM05_81	63	0.68	0.103	0.001	0.0154	0.0002	0.42146	98.4	1	99.3	1.3	123	18	99.3	1.3	0.9
13SM05_82	5.2	0.14	0.541	0.009	0.0716	0.0007	0.017878	446	4.4	438.7	5.9	409	29	438.7	5.9	1.6
13SM05_83	6.5	0.02	4.680	0.028	0.3296	0.0022	0.70552	1836	11	1763.4	5.1	1690.1	6	1690.1	6	4.3
13SM05_84	42	0.62	0.102	0.001	0.0156	0.0002	0.097815	99.53	0.98	98.9	1.3	129	22	98.9	1.3	0.6
13SM05_85	39	0.081	1.097	0.012	0.1237	0.0012	0.72025	751.9	7.1	752.3	5.6	745.8	9.6	752.3	5.6	0.1
13SM05_86	140	1	0.104	0.002	0.0148	0.0002	0.68793	94.8	1.4	100.9	2.1	261	70	100.9	2.1	6.4
13SM05_87	3	0.045	1.810	0.014	0.1810	0.0015	0.44157	1072.2	8	1048.8	5.2	1010	12	1048.8	5.2	2.2
13SM05_88	1.8	3.5	0.044	0.002	0.0067	0.0002	0.11083	43	1.1	43.3	2	280	67	43.3	2	0.7
13SM05_89	9.6	0.55	0.104	0.002	0.0152	0.0001	0.051614	97.14	0.81	100.4	1.3	178	28	100.4	1.3	3.4
13SM05_90	32	0.67	0.097	0.001	0.0146	0.0001	0.14641	93.42	0.91	94.2	1.1	151	17	94.2	1.1	0.8
13SM05_91	10	0.78	0.094	0.002	0.0147	0.0002	0.23623	93.8	1.1	91.2	1.6	104	21	91.2	1.6	2.8
13SM05_93	4.1	0.78	0.101	0.002	0.0153	0.0002	0.043491	97.9	1.2	98	1.8	150	24	98	1.8	0.1
13SM05_94	36	1.1	0.105	0.003	0.0152	0.0003	0.50375	97.2	1.8	100.8	2.6	201	32	100.8	2.6	3.7
13SM05_95	44	0.67	0.106	0.003	0.0148	0.0002	0.16544	94.99	0.93	102.3	2.5	294	52	102.3	2.5	7.7
13SM05_96	2.8	0.044	2.022	0.020	0.1913	0.0017	0.50683	1128.3	9	1122.6	6.8	1121	11	1122.6	6.8	0.5
13SM05_97	0.31	0.052	4.654	0.063	0.3122	0.0049	0.48877	1751	24	1758	11	1772	15	1772	15	0.8
13SM05_98	4.3	0.025	3.445	0.031	0.2692	0.0018	0.19375	1536.5	9	1514.2	7	1483.1	9	1483.1	9	2.1
13SM05_99	4.2	0.055	2.453	0.028	0.2165	0.0025	0.31232	1263	13	1257.7	8.1	1239	15	1239	15	1.5
13SM05_100	30	0.88	0.130	0.013	0.0160	0.0002	0.69923	102	1.4	123	11	650	180	123	11	20.6
13SM05_103	9.7	0.028	4.564	0.029	0.3184	0.0029	0.60863	1781	14	1743.2	5.4	1704.7	8.9	1704.7	8.9	2.3

13SM05_102	22	0.11	1.117	0.015	0.1266	0.0018	0.79317	768	10	761	7.1	759	11	761	7.1	0.9
13SM05_104	0.62	0.11	1.884	0.050	0.1847	0.0037	0.65959	1092	20	1076	18	1079	31	1076	18	1.5
13SM05_105	9.1	0.73	0.107	0.003	0.0156	0.0002	0.059743	99.5	1.1	102.7	2.6	270	49	102.7	2.6	3.2
13SM05_106	13	0.043	3.373	0.033	0.2731	0.0028	0.88256	1556	14	1497.7	7.7	1426.1	9.5	1426.1	9.5	5.0
13SM05_107	13	0.74	0.099	0.002	0.0151	0.0002	0.31361	96.8	1.1	95.7	1.5	117	18	95.7	1.5	1.1
13SM05_108	13	0.77	0.100	0.002	0.0153	0.0002	0.089917	98	1.1	97.2	1.6	124	18	97.2	1.6	0.8
13SM05_109	2.4	0.089	0.807	0.009	0.0979	0.0009	0.39714	601.8	5	601.3	5.2	611	16	601.3	5.2	0.1
13SM05_110	12	0.044	3.144	0.037	0.2525	0.0030	0.79393	1451	15	1442.9	9	1436.3	8.5	1436.3	8.5	0.5
13SM05_111	3.2	0.02	6.344	0.033	0.3815	0.0029	0.25116	2083	13	2025	4.7	1975.3	8.8	1975.3	8.8	2.5
13SM05_113	1.5	0.044	1.805	0.021	0.1783	0.0014	0.07546	1057.7	7.5	1047.8	7.8	1022	17	1047.8	7.8	0.9
13SM05_114	1.1	0.046	1.956	0.018	0.1908	0.0017	0.23957	1125.6	9.4	1101	6	1066	14	1101	6	2.2
13SM05_115	0.71	0.031	1.915	0.011	0.1878	0.0011	0.39696	1109.6	6	1086.3	3.7	1054.5	6.4	1086.3	3.7	2.1
13SM05_116	39	0.74	0.095	0.001	0.0144	0.0002	0.47805	92.24	0.99	91.8	1.2	105	15	91.8	1.2	0.5
13SM05_117	8.3	0.77	0.099	0.001	0.0149	0.0002	0.40965	95.1	1.1	95.8	1.2	131	16	95.8	1.2	0.7
13SM05_118	79	0.6	0.098	0.002	0.0152	0.0001	0.3567	96.9	0.9	94.7	1.4	104	21	94.7	1.4	2.3
13SM05_119	9.3	0.032	4.778	0.047	0.3302	0.0037	0.47541	1839	18	1780.7	8.3	1714	13	1714	13	3.9
13SM05_120	16	0.12	1.962	0.038	0.1871	0.0038	0.93536	1105	21	1101	13	1117	14	1101	13	0.4

Table 2a: Indianola Group: Hop Creek: Cedar Hills

Sample Name:								**207/235**		**206/238**		**206/207**		**Best age**		
Grain #	**[U] ppm**	**U/Th**	**207/235**	**2σ error**	**206/238**	**2σ error**	**RHO**	**Age Ma**	**2σ error**	**Age (Ma)**	**2σ error**	**Age (Ma)**	**2σ error**	**(Ma)**	**2σ error**	**% Discordance***
13PCI01_1	101.6	1.444	4.491	0.026	0.3179	0.0017	0.34054	1729.1	4.7	1779.4	8.3	1662.7	5.5	1662.7	5.5	7.0
13PCI01_2	69.1	0.951	5.651	0.049	0.3556	0.0031	0.52424	1923.5	7.5	1961	15	1882	10	1882	10	4.2
13PCI01_3	113	1.663	1.915	0.016	0.1884	0.0011	0.33232	1086.1	5.6	1112.7	5.9	1041.6	9.9	1112.7	5.9	2.4
13PCI01_4	83.1	0.968	0.502	0.021	0.0640	0.0007	0.4262	411	13	399.9	4	521	75	399.9	4	2.7
13PCI01_5	18.4	0.499	5.598	0.078	0.3678	0.0054	0.56005	1917	12	2022	25	1811	12	1811	12	11.7

13PCI01_6	141.9	1.544	0.870	0.009	0.1041	0.0010	0.24327	635.3	4.7	638.3	5.6	627	13	638.3	5.6	0.5
13PCI01_7	169.1	0.9826	0.511	0.006	0.0674	0.0005	0.3388	419.1	4	420.5	2.8	404	14	420.5	2.8	0.3
13PCI01_8	67.5	0.6749	0.871	0.010	0.1044	0.0010	0.32983	636.6	5.3	640.2	5.8	618	15	640.2	5.8	0.6
13PCI01_9	52.5	1.414	1.758	0.019	0.1752	0.0018	0.57232	1029.8	7.1	1040.8	9.6	1007	11	1040.8	9.6	1.1
13PCI01_10	74.6	4.03	1.802	0.019	0.1789	0.0014	0.59775	1045.8	6.9	1060.7	7.8	1017	11	1060.7	7.8	1.4
13PCI01_11	96	1.195	0.447	0.010	0.0590	0.0007	0.25007	374.6	7	369.5	4	399	38	369.5	4	1.4
13PCI01_12	77.6	2.161	4.938	0.043	0.3268	0.0031	0.86251	1808.2	7.4	1823	15	1789.5	7.3	1789.5	7.3	1.9
13PCI01_13	35.61	0.7001	0.844	0.016	0.1019	0.0009	0.36761	623.6	8.7	625.2	5.5	628	22	625.2	5.5	0.3
13PCI01_14	95.5	2.377	1.801	0.019	0.1751	0.0013	0.43646	1045.6	6.8	1039.9	7.3	1053	12	1039.9	7.3	0.5
13PCI01_15	62	1.58	1.894	0.026	0.1828	0.0022	0.39354	1078.5	8.9	1082	12	1058	22	1082	12	0.3
13PCI01_16	54.31	0.8763	11.796	0.086	0.4953	0.0031	0.6091	2588.8	6.7	2593	13	2589.2	4.3	2589.2	4.3	0.1
13PCI01_17	113	1.642	0.336	0.005	0.0452	0.0004	0.029001	293.6	3.9	285	2.5	357	25	285	2.5	2.9
13PCI01_18	93.6	0.866	1.997	0.019	0.1906	0.0015	0.58655	1114.2	6.6	1124.4	7.9	1107	11	1124.4	7.9	0.9
13PCI01_19	90.1	0.2331	1.623	0.017	0.1648	0.0013	0.38528	979.6	6.4	983.1	7.2	974	13	983.1	7.2	0.4
13PCI01_20	420.9	1.501	2.781	0.014	0.2360	0.0013	0.59769	1350.4	3.7	1365.6	6.7	1334.4	5	1334.4	5	2.3
13PCI01_21	10.15	0.6786	2.476	0.050	0.2150	0.0031	0.18951	1265	14	1255	16	1295	24	1295	24	3.1
13PCI01_22	397	2.95	0.506	0.004	0.0672	0.0005	0.43633	415.8	2.6	419.1	3	403.9	9.9	419.1	3	0.8
13PCI01_23	28.2	1.215	3.085	0.029	0.2524	0.0022	0.24587	1428.4	7.2	1452	11	1397.2	8.2	1397.2	8.2	3.9
13PCI01_24	149.9	0.651	6.717	0.038	0.3760	0.0026	0.68357	2074.6	5	2057	12	2094.4	4.5	2094.4	4.5	1.8
13PCI01_25	100.9	2.109	1.646	0.015	0.1653	0.0015	0.4602	987.8	5.6	986.2	8.5	996	10	986.2	8.5	0.2
13PCI01_26	161.1	1.044	0.110	0.003	0.0163	0.0002	0.13243	105.5	2.7	104.5	1.3	203	34	104.5	1.3	0.9
13PCI01_27	87.3	0.5518	2.182	0.018	0.2028	0.0016	0.46137	1175.9	6	1190.3	8.4	1160	11	1190.3	8.4	1.2
13PCI01_28	336.7	0.302	19.470	0.180	0.6120	0.0053	0.66655	3064.9	9.2	3078	21	3067.5	6.5	3067.5	6.5	0.3
13PCI01_28	226.9	0.2232	21.010	0.250	0.6510	0.0097	0.83292	3138	12	3231	38	3080.1	9.4	3080.1	9.4	4.9
13PCI01_29	99.9	0.9055	4.006	0.032	0.2777	0.0024	0.52683	1635.9	6.5	1579	12	1708.2	7.9	1708.2	7.9	7.6
13PCI01_30	93.8	0.531	0.848	0.009	0.1032	0.0008	0.25456	623.8	5.2	633	4.6	592	14	633	4.6	1.5
13PCI01_31	43.4	0.717	14.389	0.092	0.5561	0.0032	0.43541	2775.3	6.1	2850	13	2723.2	5.4	2723.2	5.4	4.7
13PCI01_32	320.2	2.326	0.625	0.009	0.0730	0.0005	0.33952	492.6	5.4	454.4	2.9	683	35	454.4	2.9	7.8
13PCI01_33	73.3	1.822	1.840	0.018	0.1821	0.0015	0.33229	1060.2	6.4	1078.3	8.4	1030	12	1078.3	8.4	1.7
13PCI01_34	71.7	0.9145	0.876	0.010	0.1044	0.0009	0.31719	640	5.1	640.4	5	638	15	640.4	5	0.1

13PCI01_35	91	0.983	2.905	0.027	0.2412	0.0020	0.74972	1382.8	7	1393	11	1374.8	8.8	1374.8	8.8	1.3
13PCI01_36	16.9	0.707	4.120	0.059	0.2956	0.0033	0.34587	1657	12	1669	17	1671	16	1671	16	0.1
13PCI01_37	452	1.25	4.059	0.082	0.2839	0.0036	0.5855	1646	16	1611	18	1707	28	1707	28	5.6
13PCI01_37	182	1.312	4.390	0.039	0.3167	0.0030	0.50089	1710.2	7.4	1774	15	1651	12	1651	12	7.5
13PCI01_38	77	0.905	2.043	0.024	0.1968	0.0021	0.52187	1129.4	7.9	1158	11	1084	12	1158	11	2.5
13PCI01_39	108	1.69	5.585	0.053	0.3530	0.0029	0.60448	1914.1	8.4	1949	14	1890	10	1890	10	3.1
13PCI01_40	293	8.72	0.536	0.005	0.0700	0.0007	0.033565	435.8	3.2	435.9	4.2	439	19	435.9	4.2	0.0
13PCI01_41	80.4	2.63	12.720	0.130	0.5061	0.0050	0.75658	2658.7	9.4	2639	21	2685	9.3	2685	9.3	1.7
13PCI01_42	54.6	1.241	2.002	0.021	0.1948	0.0021	0.5057	1115.9	7	1147	11	1079	10	1147	11	2.8
13PCI01_43	72.7	0.878	1.958	0.031	0.1700	0.0025	0.063916	1101	11	1012	14	1308	43	1012	14	8.1
13PCI01_43	43.2	0.801	2.080	0.038	0.1893	0.0034	0.54055	1142	13	1118	18	1225	25	1118	18	2.1
13PCI01_44	384.5	1.563	4.896	0.030	0.3323	0.0022	0.83102	1801.3	5.2	1849	11	1758.8	4.4	1758.8	4.4	5.1
13PCI01_45	25.8	0.508	1.456	0.021	0.1447	0.0016	0.10443	912.7	9	871.2	9.2	1036	21	871.2	9.2	4.5
13PCI01_46	40.5	0.7867	1.846	0.022	0.1796	0.0015	0.29927	1061.3	7.8	1066	8.2	1065	15	1066	8.2	0.4
13PCI01_47	162.5	3.3	1.941	0.025	0.1849	0.0019	0.82627	1094.5	8.7	1094	10	1112	10	1094	10	0.0
13PCI01_48	36.2	0.677	5.711	0.086	0.3607	0.0055	0.42805	1933	13	1985	26	1887	17	1887	17	5.2
13PCI01_49	152	2.191	4.881	0.029	0.3321	0.0022	0.49305	1798.8	5	1848	11	1746.7	7.6	1746.7	7.6	5.8
13PCI01_50	74.5	1.319	4.753	0.037	0.3297	0.0028	0.73646	1776.2	6.6	1837	13	1713.8	6.6	1713.8	6.6	7.2
13PCI01_51	123.4	1.175	0.537	0.012	0.0689	0.0006	0.51928	435.9	7.7	429.2	3.5	484	35	429.2	3.5	1.5
13PCI01_52	114.3	0.9563	3.345	0.023	0.2689	0.0019	0.52332	1492.1	5.4	1535.2	9.7	1436.5	7.2	1436.5	7.2	6.9
13PCI01_53	28.48	1.7	0.615	0.031	0.0724	0.0011	0.42115	484	19	450.7	6.5	638	81	450.7	6.5	6.9
13PCI01_54	58.4	1.511	4.094	0.050	0.2937	0.0032	0.69262	1652	10	1660	16	1662.9	9.7	1662.9	9.7	0.2
13PCI01_55	55.75	0.5576	3.466	0.027	0.2738	0.0025	0.41305	1519.1	6.2	1560	12	1461.5	8.7	1461.5	8.7	6.7
13PCI01_56	173	1.201	3.028	0.021	0.2555	0.0019	0.52907	1415.1	5.1	1466.6	9.8	1355.3	8.5	1355.3	8.5	8.2
13PCI01_57	309	0.6821	0.259	0.003	0.0366	0.0003	0.12006	233.8	2.4	231.9	1.8	273	15	231.9	1.8	0.8
13PCI01_58	108.7	1.473	2.368	0.019	0.2113	0.0015	0.39058	1232.8	5.7	1235.6	7.8	1239	11	1239	11	0.3
13PCI01_59	189	0.826	0.635	0.008	0.0815	0.0009	0.61771	498.7	5.2	505.2	5.4	481	14	505.2	5.4	1.3
13PCI01_60	102.6	1.641	1.958	0.017	0.1890	0.0015	0.3981	1102.9	5.8	1116	8.3	1081	10	1116	8.3	1.2
13PCI01_61	21.69	1.908	3.111	0.055	0.2478	0.0028	0.23402	1434	14	1427	14	1442	21	1442	21	1.0
13PCI01_62	206	0.2896	0.788	0.008	0.0969	0.0006	0.32733	589.8	4.6	595.9	3.7	583	13	595.9	3.7	1.0

13PCI01_63	73.9	1.397	1.874	0.020	0.1838	0.0013	0.32114	1071.3	7	1087.5	7.3	1048	11	1087.5	7.3	1.5
13PCI01_64	113.1	0.9449	1.840	0.015	0.1817	0.0014	0.34857	1059.4	5.5	1076.9	7.7	1044	11	1076.9	7.7	1.7
13PCI01_65	147	3.204	0.571	0.007	0.0714	0.0005	0.29375	458.2	4.7	444.3	3	533	15	444.3	3	3.0
13PCI01_66	80.6	2.19	1.744	0.018	0.1723	0.0017	0.46205	1024.4	6.8	1025.5	9.4	1039	13	1025.5	9.4	0.1
13PCI01_67	8.45	0.736	6.086	0.098	0.3478	0.0061	0.40333	1990	15	1923	29	2073	19	2073	19	7.2
13PCI01_68	259.9	8.54	1.780	0.017	0.1763	0.0017	0.6662	1037.9	6.1	1046.5	9.3	1025.5	8.9	1046.5	9.3	0.8
13PCI01_69	285	0.9173	5.002	0.036	0.3408	0.0029	0.83385	1819.4	6.1	1890	14	1749.1	6.4	1749.1	6.4	8.1
13PCI01_70	104	1.341	1.848	0.016	0.1829	0.0014	0.40594	1062.4	5.7	1082.8	7.5	1019.3	9.8	1082.8	7.5	1.9
13PCI01_71	299.7	1.966	0.419	0.004	0.0569	0.0005	0.3289	355.4	2.9	356.5	3	346	14	356.5	3	0.3
13PCI01_73	78.2	2.053	1.820	0.020	0.1829	0.0015	0.38645	1052.1	7	1083.6	7.9	1015	13	1083.6	7.9	3.0
13PCI01_74	143.9	1.484	4.270	0.036	0.3064	0.0023	0.47534	1687.1	7	1723	11	1650.2	8	1650.2	8	4.4
13PCI01_75	66.8	1.292	1.764	0.015	0.1770	0.0015	0.13691	1031.9	5.5	1050.7	8.1	1018	13	1050.7	8.1	1.8
13PCI01_76	30.9	0.7738	1.956	0.030	0.1870	0.0023	0.51446	1101	11	1105	12	1124	16	1105	12	0.4
13PCI01_77	150.7	0.856	1.894	0.013	0.1874	0.0012	0.2626	1079.3	4.6	1107	6.4	1035.3	8.5	1107	6.4	2.6
13PCI01_78	22.74	0.6213	1.799	0.028	0.1773	0.0022	0.07567	1044	10	1052	12	1047	20	1052	12	0.8
13PCI01_79	47.1	0.7332	0.905	0.014	0.1084	0.0011	0.033886	654.1	7.5	663.5	6.4	636	23	663.5	6.4	1.4
13PCI01_80	14.34	1.343	1.729	0.039	0.1748	0.0024	0.30103	1017	14	1038	13	1006	24	1038	13	2.1
13PCI01_81	162	2.093	2.332	0.019	0.2142	0.0018	0.39813	1221.8	5.7	1250.9	9.7	1177	11	1177	9.7	2.4
13PCI01_82	337.6	1.807	1.836	0.013	0.1798	0.0011	0.61347	1058.4	4.5	1065.7	6.2	1050.3	6	1065.7	6.2	0.7
13PCI01_83	110.9	0.439	0.560	0.008	0.0720	0.0006	0.29401	451.1	5.4	447.9	3.4	482	24	447.9	3.4	0.7
13PCI01_84	40.1	0.4215	4.155	0.036	0.3010	0.0025	0.3516	1665.7	7.3	1696	12	1632	12	1632	12	3.9
13PCI01_85	95.5	0.7562	0.406	0.005	0.0559	0.0005	0.22511	345.7	3.6	350.7	3.1	318	18	350.7	3.1	1.4
13PCI01_86	178	0.7058	0.520	0.006	0.0678	0.0005	0.21028	425.3	4.3	422.5	3.3	438	13	422.5	3.3	0.7
13PCI01_87	169	1.719	1.867	0.017	0.1833	0.0013	0.40046	1069.3	6	1085.1	7.1	1038	11	1085.1	7.1	1.5
13PCI01_88	142.6	1.028	0.898	0.008	0.1068	0.0008	0.21796	650.5	4.3	653.8	4.5	653	13	653.8	4.5	0.5
13PCI01_89	98.6	2.76	2.129	0.032	0.1983	0.0022	0.69194	1157	10	1166	12	1152	11	1166	12	0.8
13PCI01_90	118.8	3.27	0.522	0.007	0.0690	0.0007	0.17072	426.1	4.5	430.3	4	408	15	430.3	4	1.0
13PCI01_91	95.7	1.395	4.522	0.044	0.3099	0.0033	0.74491	1734.4	8.2	1740	16	1730.3	9	1730.3	9	0.6
13PCI01_92	299	1.279	3.353	0.020	0.2662	0.0019	0.6493	1493.4	4.7	1521.2	9.6	1459.3	6.6	1459.3	6.6	4.2
13PCI01_93	52.9	1.318	2.845	0.032	0.2421	0.0020	0.49482	1366.7	8.5	1397	10	1335.8	9.8	1335.8	9.8	4.6

13PCI01_94	87.7	21.5	5.771	0.042	0.3654	0.0021	0.47906	1941.6	6.2	2008	10	1883.3	7.5	1883.3	7.5	6.6
13PCI01_95	67.1	1.449	4.607	0.036	0.3171	0.0022	0.76089	1750.2	6.5	1775	11	1724.3	8.9	1724.3	8.9	2.9
13PCI01_96	61.4	0.5002	8.962	0.070	0.4532	0.0035	0.52422	2333.9	7.1	2409	16	2265.6	7.8	2265.6	7.8	6.3
13PCI01_97	230.5	0.8647	0.478	0.005	0.0641	0.0005	0.10914	396.5	3.5	400.3	2.8	387	18	400.3	2.8	1.0
13PCI01_98	120.9	1.707	1.998	0.021	0.1916	0.0023	0.60671	1114.3	7.2	1130	12	1088	11	1130	12	1.4
13PCI01_99	98	0.992	3.280	0.046	0.2614	0.0036	0.50811	1476	11	1497	18	1441	14	1441	14	3.9
13PCI01_100	30.8	0.543	0.839	0.021	0.1027	0.0013	0.075105	617	12	630.2	7.6	576	33	630.2	7.6	2.1
13PCI01_101	450	1.205	0.366	0.004	0.0494	0.0005	0.45403	316.7	2.6	310.8	2.8	347	12	310.8	2.8	1.9
13PCI01_102	211	1.254	5.172	0.030	0.3397	0.0024	0.53144	1847.9	4.9	1885	11	1811.7	5.9	1811.7	5.9	4.0
13PCI01_103	29.4	0.95	1.811	0.030	0.1789	0.0022	0.28529	1048	11	1061	12	1040	20	1061	12	1.2
13PCI01_104	419.2	6.04	0.516	0.004	0.0680	0.0005	0.37942	422.2	2.7	424.3	3	421	10	424.3	3	0.5
13PCI01_105	98	2.01	1.968	0.019	0.1879	0.0014	0.3154	1104.2	6.3	1109.8	7.8	1103	12	1109.8	7.8	0.5
13PCI01_106	113.3	0.8212	4.539	0.023	0.3199	0.0018	0.3641	1738.5	4.3	1789.2	8.6	1683.1	6.1	1683.1	6.1	6.3
13PCI01_107	441	1.245	0.109	0.002	0.0163	0.0002	0.13994	104.6	1.8	104.5	1.5	160	24	104.5	1.5	0.1
13PCI01_108	200	1.745	1.759	0.016	0.1743	0.0016	0.62828	1030.8	6.1	1036.9	8.5	1017	11	1036.9	8.5	0.6
13PCI01_109	174	0.809	2.001	0.018	0.1924	0.0015	0.49133	1115.4	6	1134.1	8	1078	11	1134.1	8	1.7
13PCI01_110	199	1.302	1.717	0.013	0.1729	0.0012	0.45189	1014.7	4.8	1028	6.7	986	10	1028	6.7	1.3
13PCI01_111	200.1	1.79	1.889	0.012	0.1851	0.0013	0.45932	1077	4.1	1094.8	7	1039.4	7.4	1094.8	7	1.7
13PCI01_112	60.5	1.087	2.314	0.027	0.2097	0.0024	0.64976	1217.5	8.7	1227	13	1198	11	1198	13	0.8
13PCI01_113	74	1.469	0.720	0.040	0.0710	0.0012	0.4014	545	23	442.3	7.1	1027	92	442.3	7.1	18.8
13PCI01_114	55.4	1.126	1.881	0.024	0.1817	0.0019	0.58355	1075	8.7	1076	11	1065	17	1076	11	0.1
13PCI01_115	231	1.365	1.673	0.012	0.1693	0.0011	0.45227	998	4.5	1008.1	6	977.8	8.8	1008.1	6	1.0
13PCI01_116	247	2.84	0.453	0.008	0.0525	0.0005	0.056488	380	5.6	329.5	2.9	707	40	329.5	2.9	13.3
13PCI01_117	216.5	1.063	0.188	0.003	0.0276	0.0003	0.14714	174.7	2.6	175.3	1.9	177	19	175.3	1.9	0.3
13PCI01_118	296	4.48	7.939	0.071	0.4235	0.0034	0.78974	2223.5	8	2276	15	2178.4	6.2	2178.4	6.2	4.5
13PCI01_119	60.3	0.5364	4.288	0.029	0.3050	0.0023	0.29659	1690.8	5.6	1716	11	1666	10	1666	10	3.0
13PCI01_120	15.7	0.975	1.837	0.033	0.1861	0.0028	0.25617	1058	12	1100	15	1014	22	1100	15	4.0
13PCI01_121	44.2	0.4598	5.754	0.052	0.3623	0.0030	0.45233	1939	7.7	1993	14	1880	10	1880	10	6.0

13PC103_1	25	0.876	2.030	0.035	0.1911	0.0027	0.42558	1127	12	1127	15	1125	21	1127	15	0.0
13PC103_2	182	1.241	0.527	0.007	0.0690	0.0007	0.45098	430.2	4.3	430	4.1	435	17	430	4.1	0.0
13PC103_3	83.1	1.313	1.969	0.022	0.1888	0.0017	0.30211	1104.4	7.5	1114.5	9	1086	12	1114.5	9	0.9
13PC103_4	224	3.05	2.228	0.022	0.2053	0.0018	0.28258	1189.4	6.8	1203.6	9.5	1156.2	9.1	1156.2	9.5	1.2
13PC103_5	438	2.032	1.898	0.017	0.1773	0.0017	0.69447	1080	5.9	1051.8	9.2	1131.8	9.5	1051.8	9.2	2.6
13PC103_6	261	0.609	3.773	0.037	0.2511	0.0026	0.69891	1588	8.2	1444	13	1785.9	7.4	1785.9	7.4	19.1
13PC103_7	310	2.442	1.867	0.021	0.1825	0.0022	0.39594	1069.4	7.4	1080	12	1045	15	1080	12	1.0
13PC103_8	137	1.637	1.655	0.013	0.1679	0.0012	0.36502	992.6	4.9	1000.7	6.4	962.6	8.3	1000.7	6.4	0.8
13PC103_9	817	21	2.007	0.056	0.1859	0.0035	0.83627	1117	19	1099	19	1151	29	1099	19	1.6
13PC103_9	583	9	2.673	0.080	0.2283	0.0058	0.75145	1318	22	1325	30	1308	27	1308	27	1.3
13PC103_10	118.7	2.043	3.027	0.019	0.2486	0.0016	0.47786	1415.1	5	1431.1	8.1	1377.4	7.3	1377.4	7.3	3.9
13PC103_11	172.1	1.104	3.445	0.022	0.2706	0.0020	0.56234	1516	4.9	1544	10	1478.8	5.8	1478.8	5.8	4.4
13PC103_12	112.4	1.038	5.431	0.043	0.3435	0.0028	0.67192	1889.4	6.8	1903	13	1864.5	6.2	1864.5	6.2	2.1
13PC103_13	256	1.591	0.559	0.007	0.0718	0.0008	0.43828	450.7	4.7	446.6	4.9	476	16	446.6	4.9	0.9
13PC103_14	431	25.2	1.785	0.018	0.1775	0.0022	0.72495	1039.7	6.7	1053	12	1020	11	1053	12	1.3
13PC103_14	89.4	1.463	2.272	0.035	0.2105	0.0027	0.65083	1203	11	1232	15	1139	17	1139	15	2.4
13PC103_15	167.7	1.603	0.989	0.012	0.1169	0.0012	0.59923	697.8	6.1	713.5	7.2	669	16	713.5	7.2	2.2
13PC103_16	81.3	1.889	2.203	0.027	0.2054	0.0023	0.56325	1184.6	9.4	1204	13	1145	15	1145	13	1.6
13PC103_17	24.2	1.756	1.915	0.033	0.1885	0.0026	0.48198	1087	11	1113	14	1058	19	1113	14	2.4
13PC103_18	167.5	0.7032	1.485	0.015	0.1551	0.0014	0.48565	924.1	6.2	929.1	8	909.2	9.5	929.1	8	0.5
13PC103_19	27.2	0.926	1.671	0.034	0.1718	0.0024	0.025734	996	13	1022	13	940	39	1022	13	2.6
13PC103_20	264.9	0.97	0.590	0.006	0.0764	0.0007	0.49599	471.1	3.9	474.7	4	450	12	474.7	4	0.8
13PC103_21	167.1	2.98	1.708	0.016	0.1713	0.0015	0.56156	1013	6	1019	8	1003	11	1019	8	0.6
13PC103_22	125.5	1.585	2.348	0.018	0.2095	0.0014	0.42551	1227.3	5.5	1226.1	7.5	1230.5	9.6	1230.5	9.6	0.4
13PC103_23	37.9	2.041	2.025	0.042	0.1887	0.0034	0.46107	1123	14	1114	18	1154	22	1114	18	0.8
13PC103_23	27.16	1.79	2.138	0.035	0.1999	0.0029	0.12632	1161	11	1175	16	1144	24	1175	16	1.2
13PC103_24	134.5	0.998	7.797	0.072	0.4133	0.0036	0.785	2207.2	8.2	2230	17	2179.6	5.8	2179.6	5.8	2.3
13PC103_25	55.1	1.324	1.794	0.031	0.1737	0.0018	0.28274	1044	11	1033	10	1059	27	1033	10	1.1
13PC103_26	224	2.021	1.879	0.018	0.1826	0.0014	0.5961	1073.4	6.3	1081	7.7	1053.8	6.6	1081	7.7	0.7
13PC103_27	150.9	1.838	5.715	0.040	0.3562	0.0025	0.52236	1933.2	6.1	1964	12	1895.1	7.3	1895.1	7.3	3.6

13PC103_28	67.1	1.126	1.930	0.021	0.1855	0.0017	0.28401	1090.9	7.1	1097.1	9.4	1086	17	1097.1	9.4	0.6
13PC103_29	38.2	0.8642	13.440	0.120	0.5166	0.0056	0.53872	2711.5	8	2687	24	2729	10	2729	10	1.5
13PC103_31	82.3	1.079	3.460	0.028	0.2663	0.0020	0.33555	1518.5	6.3	1522	10	1507.7	7.9	1507.7	7.9	0.9
13PC103_32	233	1.072	0.542	0.006	0.0708	0.0007	0.43874	439.6	4	441.2	4.3	433	16	441.2	4.3	0.4
13PC103_33	67.8	1.625	2.972	0.029	0.2476	0.0024	0.45364	1400	7.5	1426	13	1365	10	1365	10	4.5
13PC103_34	202	1.402	14.470	0.170	0.5446	0.0076	0.29236	2781	11	2802	32	2764	14	2764	14	1.4
13PC103_34	26.56	0.4094	14.830	0.180	0.5625	0.0068	0.57179	2806	11	2876	28	2755	9.9	2755	9.9	4.4
13PC103_35	128.1	1.103	1.871	0.018	0.1781	0.0016	0.58365	1071.3	6.4	1056.4	8.7	1098.1	9.7	1056.4	8.7	1.4
13PC103_36	22.08	0.866	10.730	0.130	0.4807	0.0061	0.61772	2499	12	2529	27	2472	12	2472	12	2.3
13PC103_37	13.82	1.319	1.932	0.052	0.1842	0.0029	0.037249	1090	18	1092	15	1114	32	1092	15	0.2
13PC103_38	196.8	0.85	13.930	0.100	0.5376	0.0043	0.82028	2744.3	6.9	2773	18	2714.5	5.2	2714.5	5.2	2.2
13PC103_39	140	1.541	3.440	0.025	0.2694	0.0020	0.47097	1513.2	5.8	1538	10	1485.1	8.9	1485.1	8.9	3.6
13PC103_40	98.8	1.143	2.451	0.021	0.2191	0.0020	0.61408	1257.3	6.2	1277	11	1222.6	8.4	1222.6	8.4	4.4
13PC103_41	44.3	0.2631	14.560	0.110	0.5338	0.0040	0.5577	2786.7	7	2757	17	2805.9	5.5	2805.9	5.5	1.7
13PC103_42	189.5	1.228	2.186	0.015	0.2037	0.0018	0.64793	1176.4	4.7	1195.1	9.7	1145.8	8.8	1195.1	9.7	1.6
13PC103_43	144.4	1.85	4.049	0.034	0.2920	0.0025	0.69664	1643.7	6.8	1651	12	1631.3	6.5	1631.3	6.5	1.2
13PC103_44	150.2	1.255	2.281	0.018	0.2018	0.0017	0.37557	1206.9	5.6	1184.7	8.9	1239	11	1184.7	8.9	1.8
13PC103_45	137	1.036	5.832	0.036	0.3636	0.0025	0.71106	1950.9	5.3	1999	12	1894.6	5.3	1894.6	5.3	5.5
13PC103_46	212.3	7.2	5.698	0.046	0.3453	0.0031	0.71381	1932.6	7.4	1912	15	1955.1	7.1	1955.1	7.1	2.2
13PC103_47	115.2	1.229	2.118	0.020	0.1960	0.0020	0.44531	1154.2	6.5	1154	11	1158	10	1154	11	0.0
13PC103_48	97.2	0.977	4.264	0.035	0.3026	0.0024	0.6726	1686	6.7	1704	12	1660.3	7.5	1660.3	7.5	2.6
13PC103_49	236	1.526	1.898	0.013	0.1850	0.0014	0.48371	1081.3	4.5	1094.3	7.4	1047.8	8	1094.3	7.4	1.2
13PC103_50	129.3	1.21	4.978	0.042	0.3313	0.0028	0.66594	1815.1	7.1	1844	14	1788.1	7.2	1788.1	7.2	3.1
13PC103_51	127.4	1.081	1.669	0.014	0.1661	0.0014	0.52287	997.3	5.3	990.7	7.8	1003.6	9.4	990.7	7.8	0.7
13PC103_52	152	0.964	2.805	0.020	0.2371	0.0016	0.58835	1356.7	5.4	1371.3	8.3	1332	6.4	1332	6.4	3.0
13PC103_53	300	2.045	2.933	0.026	0.2461	0.0020	0.69393	1393	6.4	1418	10	1346.7	6.6	1346.7	6.6	5.3
13PC103_55	58.7	1.14	11.880	0.110	0.4676	0.0042	0.70662	2597.8	8.7	2473	18	2690.7	8.5	2690.7	8.5	8.1
13PC103_56	124	3.3	1.911	0.027	0.1863	0.0021	0.79198	1084.2	9.5	1101	11	1052	12	1101	11	1.5
13PC103_57	71.6	0.872	2.050	0.022	0.1923	0.0016	0.096277	1131.8	7.3	1133.7	8.7	1123	13	1133.7	8.7	0.2
13PC103_58	355	1.57	4.615	0.038	0.3080	0.0029	0.34981	1751.8	6.8	1731	14	1779	10	1779	10	2.7

13PC103_58	248	1.545	4.862	0.052	0.3219	0.0030	0.90863	1795.4	8.9	1799	15	1785.7	8.2	1785.7	8.2	0.7
13PC103_59	130.4	2.725	1.742	0.015	0.1746	0.0013	0.44662	1024	5.5	1037.5	6.9	1000	11	1037.5	6.9	1.3
13PC103_60	87.6	0.3308	14.498	0.087	0.5325	0.0049	0.68037	2782.6	5.7	2751	21	2799.8	6.4	2799.8	6.4	1.7
13PC103_61	65.7	1.125	2.031	0.024	0.1958	0.0018	0.45134	1125.4	8	1152.6	9.8	1077	10	1152.6	9.8	2.4
13PC103_62	155.6	1.211	0.474	0.007	0.0645	0.0007	0.39964	394.3	4.3	403	4.5	356	18	403	4.5	2.2
13PC103_63	104	1.42	2.876	0.029	0.2427	0.0023	0.29334	1375.1	7.6	1401	12	1334	12	1334	12	5.0
13PC103_64	47.8	0.5148	1.837	0.027	0.1829	0.0021	0.51361	1059	10	1082	11	1005	16	1082	11	2.2
13PC103_65	342	10.4	3.588	0.076	0.2428	0.0059	0.87506	1546	17	1401	31	1775	11	1775	11	21.1
13PC103_65	105.1	0.44	4.112	0.056	0.2652	0.0036	0.70513	1658	11	1519	18	1855	12	1855	12	18.1
13PC103_66	73.9	0.8472	2.028	0.019	0.1917	0.0020	0.60249	1124.4	6.5	1131	11	1110	10	1131	11	0.6
13PC103_67	48.9	0.555	13.240	0.120	0.4987	0.0034	0.61129	2696.3	8.3	2608	15	2761.6	9.5	2761.6	9.5	5.6
13PC103_68	218	2.03	5.832	0.064	0.3487	0.0038	0.73756	1950.3	9.6	1928	18	1964	12	1964	12	1.8
13PC103_69	54.1	1.456	1.799	0.027	0.1785	0.0021	0.73344	1047.1	9.6	1059	12	1023	18	1059	12	1.1
13PC103_70	200.9	1.283	4.818	0.046	0.3192	0.0034	0.68734	1788.4	8.1	1786	17	1784.4	8.7	1784.4	8.7	0.1
13PC103_71	384	1.916	3.989	0.028	0.2847	0.0021	0.76431	1632.4	5.5	1615	10	1651	4.9	1651	4.9	2.2
13PC103_72	204.3	6.414	11.635	0.094	0.4928	0.0053	0.7434	2575.2	7.5	2582	23	2567.4	6	2567.4	6	0.6
13PC103_73	59	1.632	1.948	0.033	0.1816	0.0025	0.57782	1098	12	1075	14	1129	19	1075	14	2.1
13PC103_74	235.9	5.5	1.443	0.019	0.1482	0.0018	0.84904	907.4	7.9	890	10	941.9	8.8	890	10	1.9
13PC103_75	19.99	0.94	6.882	0.095	0.3853	0.0057	0.54381	2097	13	2100	27	2097	13	2097	13	0.1
13PC103_76	66.3	1.237	2.235	0.033	0.2075	0.0026	0.17322	1193	11	1215	14	1166	20	1166	14	1.8
13PC103_77	284	1.972	1.861	0.013	0.1835	0.0013	0.51857	1067.2	4.8	1085.8	6.9	1038.7	7.4	1085.8	6.9	1.7
13PC103_78	141	1.259	2.807	0.031	0.2335	0.0023	0.69938	1356.9	8.1	1353	12	1370.8	9.6	1370.8	9.6	1.3
13PC103_79	171.5	0.384	13.330	0.120	0.5196	0.0045	0.7506	2702.4	8.4	2697	19	2699.2	6.7	2699.2	6.7	0.1
13PC103_80	43.3	0.908	0.584	0.013	0.0753	0.0010	0.049467	466.3	8.4	467.9	6.1	451	33	467.9	6.1	0.3
13PC103_81	78.5	1.542	1.779	0.017	0.1768	0.0014	0.27594	1039.2	6.2	1049.3	7.8	1020	13	1049.3	7.8	1.0
13PC103_82	286	3.21	1.916	0.019	0.1858	0.0014	0.45122	1086.3	6.5	1099.7	7.7	1052.6	9.8	1099.7	7.7	1.2
13PC103_83	174	1.387	4.673	0.051	0.3169	0.0038	0.67918	1762	9.1	1774	19	1737.5	6.4	1737.5	6.4	2.1
13PC103_84	82.9	1.117	2.201	0.026	0.2019	0.0018	0.4233	1180.6	8.3	1185.4	9.6	1165	13	1185.4	9.6	0.4
13PC103_85	88.43	1.495	2.234	0.026	0.2056	0.0016	0.12349	1191	8.2	1205.2	8.7	1166	14	1166	8.7	1.2
13PC103_86	268	1.747	2.472	0.016	0.2215	0.0016	0.57876	1264.2	4.9	1289.6	8.3	1226.1	6.8	1226.1	6.8	5.2

13PC103_87	92.1	0.4705	1.849	0.019	0.1795	0.0017	0.44196	1062.7	6.6	1064.2	9.2	1061	12	1064.2	9.2	0.1
13PC103_88	73.6	1.358	30.370	0.400	0.7155	0.0096	0.80751	3501	12	3478	36	3498.3	6.7	3498.3	6.7	0.6
13PC103_89	381	2.84	2.553	0.073	0.2216	0.0061	0.698	1293	23	1290	32	1321	16	1321	16	2.3
13PC103_89	161.5	1.742	2.891	0.027	0.2465	0.0023	0.58709	1379.3	7.1	1420	12	1321.3	9.7	1321.3	9.7	7.5
13PC103_90	112.8	1.0107	2.211	0.019	0.2024	0.0015	0.51008	1184.3	5.9	1188	7.9	1168.8	7.8	1188	7.9	0.3
13PC103_91	49.1	1.042	2.463	0.030	0.2219	0.0022	0.49681	1261.8	8.6	1293	11	1208	11	1208	11	7.0
13PC103_92	231	1.069	0.576	0.008	0.0738	0.0010	0.59283	461.6	5.4	458.7	5.7	474	18	458.7	5.7	0.6
13PC103_93	391.9	15.1	1.628	0.015	0.1666	0.0019	0.61534	981.1	5.8	993	11	961	10	993	11	1.2
13PC103_93	119.6	1.365	2.250	0.045	0.2111	0.0034	0.7443	1196	14	1234	18	1128	19	1128	18	3.2
13PC103_94	307	1.718	1.941	0.013	0.1851	0.0016	0.61954	1096.4	4.7	1094.9	8.9	1095	7.1	1094.9	8.9	0.1
13PC103_95	35.27	0.2161	10.970	0.110	0.4863	0.0051	0.58071	2519.8	9.3	2554	22	2489	10	2489	10	2.6
13PC103_96	38.51	1.892	1.514	0.023	0.1576	0.0016	0.23235	935.4	9.4	943.1	8.9	905	19	943.1	8.9	0.8
13PC103_97	141.4	0.828	0.468	0.006	0.0624	0.0005	0.37333	389.3	4.4	390.4	3.3	375	19	390.4	3.3	0.3
13PC103_98	306.8	2.64	4.778	0.055	0.3159	0.0034	0.71207	1780.8	9.7	1769	17	1800	9.8	1800	9.8	1.7
13PC103_98	278.8	2.107	4.920	0.035	0.3258	0.0025	0.56829	1805.5	6	1818	12	1784.8	6.6	1784.8	6.6	1.9
13PC103_99	66.9	1.881	1.851	0.021	0.1833	0.0015	0.54816	1064.3	7.7	1084.8	8.3	1027	12	1084.8	8.3	1.9
13PC103_100	103.3	0.95	4.160	0.035	0.2979	0.0024	0.43264	1665.8	6.9	1681	12	1650	12	1650	12	1.9
13PC103_102	180.9	1.531	1.899	0.024	0.1761	0.0020	0.61759	1080.3	8.2	1046	11	1155	11	1046	11	3.2
13PC103_103	118.8	1.954	5.519	0.043	0.3467	0.0026	0.58389	1904.1	6.8	1920	12	1881.6	8.2	1881.6	8.2	2.0
13PC103_104	126	1.645	1.810	0.016	0.1770	0.0015	0.4188	1048.7	5.8	1050.7	8.5	1047	14	1050.7	8.5	0.2
13PC103_105	60.9	1.268	17.120	0.150	0.5811	0.0059	0.7617	2941	8.5	2952	24	2927.4	5.4	2927.4	5.4	0.8
13PC103_106	118.5	2.581	1.769	0.016	0.1770	0.0018	0.73997	1034.6	6.2	1050.2	9.7	997.6	9.8	1050.2	9.7	1.5
13PC103_107	89.7	1.555	3.549	0.033	0.2725	0.0024	0.67507	1537.7	7.3	1553	12	1514.9	7.3	1514.9	7.3	2.5
13PC103_108	229	1.715	1.867	0.016	0.1838	0.0014	0.52318	1070.7	5.3	1087.4	7.7	1036	8.9	1087.4	7.7	1.6
13PC103_109	44.2	0.741	4.068	0.054	0.2921	0.0036	0.45761	1647	11	1652	18	1639	16	1639	16	0.8
13PC103_110	107.4	0.807	13.760	0.150	0.5386	0.0057	0.41043	2733	10	2777	24	2705	12	2705	12	2.7
13PC103_110	62.8	0.733	14.270	0.140	0.5579	0.0058	0.58223	2767.3	9.4	2858	24	2698	11	2698	11	5.9
13PC103_111	310	2.37	0.531	0.015	0.0695	0.0017	0.78094	432	10	435	11	439	30	435	11	0.7
13PC103_111	63.6	1.645	1.748	0.043	0.1751	0.0037	0.28703	1029	17	1040	20	992	35	1040	20	1.1
13PC103_112	144	1.453	1.851	0.015	0.1801	0.0013	0.3929	1063.4	5.5	1067.5	6.9	1062.6	9.6	1067.5	6.9	0.4

13PC103_113	55.6	0.75	2.021	0.029	0.1932	0.0022	0.43136	1121.8	9.8	1139	12	1109	17	1139	12	1.5
13PC103_114	45.6	1.751	2.342	0.058	0.2141	0.0039	0.8546	1225	19	1250	21	1196	20	1196	21	2.0
13PC103_115	197.6	1.021	0.570	0.006	0.0730	0.0008	0.24217	457.5	4	454.1	4.6	484	17	454.1	4.6	0.7
13PC103_116	121.6	1.718	2.068	0.020	0.1949	0.0021	0.6032	1138.8	6.6	1148	11	1118.8	9.7	1148	11	0.8
13PC103_117	59.3	0.8208	4.318	0.042	0.3082	0.0027	0.52712	1697.2	8.1	1732	13	1652.9	9.2	1652.9	9.2	4.8
13PC103_118	130.8	1.046	3.604	0.027	0.2784	0.0026	0.41004	1550	6	1583	13	1505.5	9.1	1505.5	9.1	5.1
13PC103_119	44.3	0.932	5.749	0.056	0.3543	0.0037	0.48547	1938.2	8.4	1955	18	1919.1	9.4	1919.1	9.4	1.9
13PC103_120	423	2.168	1.980	0.030	0.1879	0.0042	0.9173	1108	10	1110	23	1081	11	1110	23	0.2

Table 2a: Dakota Formation: West San Rafael Swell

Sample Name:								**207/235**		**206/238**		**206/207**		**Best age**		
Grain #	**[U] ppm**	**U/Th**	**207/235**	**2σ error**	**206/238**	**2σ error**	**RHO**	**Age Ma**	**2σ error**	**Age (Ma)**	**2σ error**	**Age (Ma)**	**2σ error**	**(Ma)**	**2σ error**	**% Discordance ***
11UCCF02_1	90.20	1.40	4.873	0.032	0.3307	0.0020	0.76	1797.4	5.6	1841.6	9.8	1743.8	5.7	1743.8	5.7	5.6
11UCCF02_2	406.00	1.16	0.130	0.002	0.0192	0.0002	0.23	124.1	1.4	122.6	0.9	139.0	18.0	122.6	0.9	1.2
11UCCF02_3	194.70	1.30	0.407	0.005	0.0553	0.0004	0.04	346.7	3.5	346.7	2.4	345.0	18.0	346.7	2.4	0.0
11UCCF02_4	289.00	1.12	0.125	0.002	0.0183	0.0003	0.21	119.4	1.7	117.0	1.8	177.0	28.0	117.0	1.8	2.0
11UCCF02_5	60.20	1.19	2.126	0.031	0.1941	0.0015	0.25	1156.0	10.0	1143.5	8.0	1166.0	29.0	1143.5	8.0	1.1
11UCCF02_6	461.60	1.21	0.418	0.004	0.0569	0.0004	0.36	354.5	2.5	356.7	2.5	338.0	12.0	356.7	2.5	0.6
11UCCF02_7	47.10	1.08	2.118	0.026	0.1970	0.0020	0.31	1154.1	8.6	1159.0	11.0	1141.0	16.0	1159.0	11.0	0.4
11UCCF02_8	74.99	1.03	0.598	0.009	0.0766	0.0008	0.25	475.6	5.4	475.7	5.0	463.0	24.0	475.7	5.0	0.0
11UCCF02_9	281.00	2.23	1.848	0.010	0.1816	0.0010	0.35	1063.0	3.6	1075.4	5.2	1036.0	6.7	1075.4	5.2	1.2
11UCCF02_10	478.00	0.95	5.554	0.082	0.3414	0.0050	0.95	1908.0	13.0	1893.0	24.0	1922.6	7.7	1922.6	7.7	1.5
11UCCF02_11	161.00	1.33	6.193	0.044	0.3662	0.0028	0.82	2003.3	6.2	2011.0	13.0	1994.9	5.3	1994.9	5.3	0.8
11UCCF02_12	404.80	1.66	12.833	0.090	0.5099	0.0038	0.77	2668.0	6.4	2656.0	16.0	2673.9	5.2	2673.9	5.2	0.7
11UCCF02_13	519.00	3.29	2.112	0.016	0.1972	0.0017	0.77	1152.6	5.4	1161.6	9.2	1134.3	9.2	1161.6	9.2	0.8
11UCCF02_14	73.00	1.16	0.857	0.011	0.1035	0.0011	0.25	628.1	6.2	634.6	6.4	612.0	19.0	634.6	6.4	1.0
11UCCF02_15	222.20	0.95	0.897	0.012	0.1002	0.0009	0.17	649.9	6.4	615.5	5.2	783.0	23.0	615.5	5.2	5.3

11UCCF02_16	93.70	1.07	2.344	0.027	0.2106	0.0017	0.57	1226.8	8.7	1231.7	8.9	1217.0	17.0	1217.0	17.0	1.2
11UCCF02_17	42.40	0.94	2.931	0.032	0.2431	0.0025	0.63	1389.5	8.2	1403.0	13.0	1388.0	9.7	1388.0	9.7	1.1
11UCCF02_18	56.50	0.73	4.150	0.035	0.3004	0.0031	0.83	1663.8	6.9	1693.0	15.0	1631.0	11.0	1631.0	11.0	3.8
11UCCF02_19	558.00	1.39	1.998	0.025	0.1543	0.0022	0.83	1114.7	8.3	925.0	12.0	1505.6	7.4	925.0	12.0	17.0
11UCCF02_20	107.10	1.29	0.530	0.007	0.0697	0.0007	0.39	431.8	4.4	434.1	4.2	418.0	18.0	434.1	4.2	0.5
11UCCF02_21	178.10	1.36	1.703	0.025	0.1510	0.0029	0.75	1009.2	9.5	906.0	16.0	1239.0	15.0	906.0	16.0	10.2
11UCCF02_22	69.10	100.50	0.526	0.012	0.0691	0.0012	0.37	429.2	8.0	430.8	7.5	397.0	42.0	430.8	7.5	0.4
11UCCF02_23	175.00	3.08	0.529	0.012	0.0687	0.0013	0.74	430.9	7.8	428.0	7.8	462.0	19.0	428.0	7.8	0.7
11UCCF02_24	140.10	0.80	15.699	0.066	0.5771	0.0031	0.43	2858.5	4.0	2938.0	13.0	2804.8	4.4	2804.8	4.4	4.7
11UCCF02_25	300.00	0.70	0.962	0.008	0.1126	0.0012	0.25	684.3	4.3	687.8	6.7	677.0	16.0	687.8	6.7	0.5
11UCCF02_26	380.00	1.04	0.121	0.002	0.0182	0.0002	0.18	115.6	1.7	116.3	1.2	132.0	17.0	116.3	1.2	0.6
11UCCF02_27	92.60	1.26	2.274	0.017	0.2108	0.0016	0.49	1204.7	5.0	1233.1	8.7	1167.0	11.0	1167.0	8.7	2.4
11UCCF02_28	208.30	1.19	0.879	0.010	0.1050	0.0009	0.28	640.3	5.2	643.7	5.4	627.0	21.0	643.7	5.4	0.5
11UCCF02_29	46.20	0.04	1.812	0.021	0.0748	0.0008	0.16	1050.3	7.6	465.1	4.7	2618.0	16.0	DISC	DISC	82.2
11UCCF02_30	36.24	1.02	0.741	0.017	0.0874	0.0013	0.39	562.1	9.6	540.2	7.5	641.0	42.0	540.2	7.5	3.9
11UCCF02_31	54.00	0.72	5.032	0.043	0.3400	0.0036	0.45	1824.4	7.3	1886.0	17.0	1762.0	13.0	1762.0	13.0	7.0
11UCCF02_32	66.40	0.86	4.101	0.039	0.2986	0.0027	0.72	1655.0	7.9	1684.0	13.0	1619.9	6.5	1619.9	6.5	4.0
11UCCF02_33	147.20	1.91	4.795	0.035	0.3246	0.0028	0.63	1783.6	6.1	1812.0	13.0	1746.0	7.5	1746.0	7.5	3.8
11UCCF02_34	261.60	4.58	2.074	0.027	0.1969	0.0018	0.78	1139.5	8.9	1158.5	9.7	1102.0	12.0	1158.5	9.7	1.7
11UCCF02_35	34.40	1.66	1.779	0.022	0.1712	0.0018	0.11	1037.3	8.1	1020.0	10.0	1077.0	21.0	1020.0	10.0	1.7
11UCCF02_36	179.00	23.00	1.860	0.034	0.1833	0.0033	0.55	1067.0	12.0	1085.0	18.0	1023.0	23.0	1085.0	18.0	1.7
11UCCF02_36	138.00	1.13	3.580	0.053	0.2779	0.0038	0.53	1545.0	12.0	1581.0	19.0	1499.0	12.0	1499.0	12.0	5.5
11UCCF02_37	255.00	2.02	0.512	0.006	0.0649	0.0007	0.50	419.7	3.8	405.5	4.1	499.0	13.0	405.5	4.1	3.4
11UCCF02_38	97.70	1.24	0.925	0.012	0.1112	0.0009	0.29	665.2	6.0	679.6	5.0	627.0	15.0	679.6	5.0	2.2
11UCCF02_39	61.80	0.61	0.884	0.012	0.1069	0.0011	0.15	643.0	6.6	654.4	6.2	629.0	18.0	654.4	6.2	1.8
11UCCF02_40	261.00	71.60	1.698	0.011	0.1712	0.0010	0.54	1008.4	4.2	1018.7	5.5	990.5	7.0	1018.7	5.5	1.0
11UCCF02_41	96.00	1.77	3.401	0.045	0.2730	0.0030	0.70	1505.0	10.0	1556.0	15.0	1447.6	9.6	1447.6	9.6	7.5
11UCCF02_42	55.60	2.08	5.124	0.083	0.3040	0.0040	0.73	1840.0	14.0	1711.0	20.0	2010.0	12.0	2010.0	12.0	14.9
11UCCF02_43	162.00	0.79	7.405	0.051	0.4124	0.0029	0.70	2161.2	6.1	2226.0	13.0	2104.7	4.8	2104.7	4.8	5.8
11UCCF02_44	88.30	1.29	1.898	0.015	0.1860	0.0015	0.53	1080.8	5.3	1099.6	8.2	1037.2	8.4	1099.6	8.2	1.7
11UCCF02_45	232.00	0.85	0.850	0.012	0.0964	0.0028	0.78	624.4	6.4	593.0	17.0	734.0	40.0	593.0	17.0	5.0
11UCCF02_46	131.20	1.04	0.846	0.008	0.1018	0.0006	0.08	622.6	4.5	625.2	3.7	619.0	13.0	625.2	3.7	0.4
11UCCF02_47	105.20	0.49	0.593	0.007	0.0760	0.0008	0.14	472.9	4.7	471.9	5.1	480.0	16.0	471.9	5.1	0.2
11UCCF02_48	49.60	0.68	1.766	0.026	0.1729	0.0026	0.60	1032.3	9.6	1028.0	14.0	1059.0	14.0	1028.0	14.0	0.4
11UCCF02_49	58.10	1.19	1.770	0.019	0.1739	0.0018	0.32	1034.0	7.1	1033.2	9.8	1022.0	17.0	1033.2	9.8	0.1

11UCCF02_50	311.00	1.01	3.445	0.043	0.2552	0.0032	0.91	1513.9	9.7	1465.0	16.0	1593.8	5.6	1593.8	5.6	8.1
11UCCF02_51	184.00	2.67	0.518	0.006	0.0687	0.0006	0.18	423.3	4.0	428.4	3.4	417.0	16.0	428.4	3.4	1.2
11UCCF02_52	20.10	1.83	1.837	0.029	0.1822	0.0020	0.31	1059.0	11.0	1079.0	11.0	1032.0	18.0	1079.0	11.0	1.9
11UCCF02_53	95.20	1.02	1.797	0.017	0.1783	0.0016	0.50	1045.5	6.1	1057.5	9.0	1021.0	11.0	1057.5	9.0	1.1
11UCCF02_54	169.30	0.84	4.074	0.025	0.2951	0.0015	0.43	1649.0	5.0	1667.1	7.7	1638.4	8.0	1638.4	8.0	1.8
11UCCF02_55	83.70	1.52	2.312	0.025	0.2116	0.0019	0.68	1216.5	8.0	1237.0	10.0	1180.0	10.0	1180.0	10.0	1.7
11UCCF02_56	64.20	1.17	16.993	0.086	0.5860	0.0033	0.50	2934.2	4.9	2973.0	13.0	2912.5	5.8	2912.5	5.8	2.1
11UCCF02_57	25.65	1.07	1.903	0.027	0.1865	0.0021	0.29	1081.3	9.3	1102.0	11.0	1048.0	17.0	1102.0	11.0	1.9
11UCCF02_58	66.50	0.70	0.715	0.013	0.0894	0.0010	0.31	549.1	7.8	551.8	5.9	565.0	19.0	551.8	5.9	0.5
11UCCF02_59	85.20	1.48	1.883	0.017	0.1840	0.0015	0.26	1074.8	5.8	1088.7	7.9	1060.0	12.0	1088.7	7.9	1.3
11UCCF02_60	94.60	1.31	3.638	0.027	0.2825	0.0030	0.88	1557.6	6.0	1603.0	15.0	1504.0	13.0	1504.0	13.0	6.6
11UCCF02_61	72.60	0.42	0.844	0.011	0.1049	0.0009	0.29	621.0	6.3	642.9	5.5	562.0	17.0	642.9	5.5	3.5
11UCCF02_62	149.70	1.34	2.969	0.028	0.2415	0.0016	0.61	1399.4	7.1	1394.5	8.3	1407.3	8.9	1407.3	8.9	0.9
11UCCF02_63	44.94	0.62	4.505	0.046	0.3219	0.0027	0.23	1733.1	8.1	1799.0	13.0	1652.0	11.0	1652.0	11.0	8.9
11UCCF02_64	126.00	2.09	2.046	0.019	0.1957	0.0022	0.69	1130.7	6.4	1152.0	12.0	1092.0	12.0	1152.0	12.0	1.9
11UCCF02_65	139.80	0.44	0.535	0.007	0.0711	0.0006	0.22	435.0	4.4	442.5	3.3	417.0	17.0	442.5	3.3	1.7
11UCCF02_66	39.34	0.75	0.836	0.033	0.0946	0.0011	0.08	614.0	18.0	582.5	6.8	733.0	64.0	582.5	6.8	5.1
11UCCF02_67	49.80	1.61	4.898	0.046	0.3291	0.0027	0.61	1803.5	7.9	1834.0	13.0	1778.5	8.6	1778.5	8.6	3.1
11UCCF02_68	98.10	2.10	5.019	0.035	0.3358	0.0021	0.59	1823.0	6.0	1866.0	10.0	1784.4	7.5	1784.4	7.5	4.6
11UCCF02_69	87.00	0.79	1.997	0.023	0.1932	0.0018	0.59	1115.0	7.6	1138.4	9.9	1078.0	11.0	1138.4	9.9	2.1
11UCCF02_70	22.39	1.12	4.272	0.051	0.3060	0.0029	0.20	1687.2	9.8	1721.0	14.0	1642.0	14.0	1642.0	14.0	4.8
11UCCF02_71	205.00	1.03	0.838	0.008	0.1012	0.0008	0.42	618.1	4.2	621.4	4.6	625.0	11.0	621.4	4.6	0.5
11UCCF02_72	78.10	0.94	4.688	0.059	0.3246	0.0042	0.80	1768.0	11.0	1812.0	21.0	1727.0	11.0	1727.0	11.0	4.9
11UCCF02_73	128.20	0.67	1.700	0.016	0.1709	0.0017	0.75	1009.3	6.3	1016.7	9.3	1011.0	10.0	1016.7	9.3	0.7
11UCCF02_74	118.00	0.86	0.286	0.006	0.0409	0.0005	0.17	256.0	4.5	258.2	2.8	246.0	25.0	258.2	2.8	0.9
11UCCF02_75	321.30	2.96	0.117	0.002	0.0171	0.0002	0.09	112.5	2.0	109.2	1.2	209.0	31.0	109.2	1.2	2.9
11UCCF02_76	78.10	1.28	1.742	0.022	0.1767	0.0019	0.72	1023.7	8.2	1049.0	11.0	984.0	10.0	1049.0	11.0	2.5
11UCCF02_77	36.70	0.73	0.889	0.015	0.1066	0.0011	0.05	645.2	7.9	652.6	6.6	635.0	24.0	652.6	6.6	1.1
11UCCF02_78	99.40	1.28	6.219	0.046	0.3721	0.0035	0.39	2008.7	6.6	2039.0	16.0	1980.0	14.0	1980.0	14.0	3.0
11UCCF02_79	71.90	4.82	2.351	0.027	0.2117	0.0018	0.65	1227.3	8.0	1237.9	9.7	1224.0	10.0	1224.0	10.0	1.1
11UCCF02_80	82.60	1.12	1.900	0.019	0.1862	0.0017	0.32	1080.9	6.5	1100.9	9.0	1053.0	14.0	1100.9	9.0	1.9
11UCCF02_81	182.30	0.92	0.124	0.003	0.0183	0.0002	0.23	118.3	2.7	116.9	1.4	193.0	31.0	116.9	1.4	1.2
11UCCF02_82	49.40	0.99	3.938	0.061	0.2865	0.0045	0.66	1623.0	12.0	1623.0	23.0	1633.0	12.0	1633.0	12.0	0.6
11UCCF02_83	107.00	1.07	0.345	0.005	0.0479	0.0005	0.18	300.7	3.4	301.7	2.9	302.0	20.0	301.7	2.9	0.3
11UCCF02_84	41.85	1.09	0.331	0.008	0.0443	0.0008	0.08	290.7	6.2	279.3	4.7	394.0	36.0	279.3	4.7	3.9

11UCCF02_85	271.10	1.59	0.716	0.009	0.0879	0.0009	0.38	546.3	3.9	542.8	5.2	570.0	16.0	542.8	5.2	0.6
11UCCF02_86	248.00	0.48	0.507	0.007	0.0646	0.0009	0.60	416.2	4.4	403.5	5.3	492.0	14.0	403.5	5.3	3.1
11UCCF02_87	276.00	1.02	13.476	0.072	0.5302	0.0033	0.69	2713.4	5.0	2742.0	14.0	2697.5	3.6	2697.5	3.6	1.6
11UCCF02_88	146.00	1.56	2.890	0.047	0.2397	0.0046	0.95	1378.0	13.0	1385.0	24.0	1383.0	16.0	1383.0	16.0	0.1
11UCCF02_89	21.61	0.79	1.948	0.031	0.1895	0.0023	0.30	1099.0	10.0	1119.0	13.0	1071.0	18.0	1119.0	13.0	1.8
11UCCF02_90	54.02	1.88	1.913	0.022	0.1890	0.0020	0.70	1085.2	7.8	1116.0	11.0	1041.0	13.0	1116.0	11.0	2.8
11UCCF02_91	100.90	1.72	0.118	0.004	0.0176	0.0003	0.23	113.4	3.2	112.2	1.6	204.0	36.0	112.2	1.6	1.1
11UCCF02_92	107.30	2.37	0.547	0.008	0.0717	0.0007	0.26	443.1	5.4	446.6	4.2	425.0	21.0	446.6	4.2	0.8
11UCCF02_93	613.00	0.79	0.814	0.005	0.0973	0.0006	0.38	604.6	2.7	598.5	3.3	633.4	7.0	598.5	3.3	1.0
11UCCF02_94	62.40	1.23	1.536	0.022	0.1572	0.0016	0.46	944.0	8.6	940.9	8.9	944.0	15.0	940.9	8.9	0.3
11UCCF02_95	265.00	2.50	2.036	0.015	0.1947	0.0015	0.58	1128.1	5.0	1146.5	7.9	1100.3	8.6	1146.5	7.9	1.6
11UCCF02_96	93.20	0.97	0.909	0.011	0.1082	0.0009	0.38	656.3	5.9	662.1	5.1	652.0	16.0	662.1	5.1	0.9
11UCCF02_97	552.00	1.27	0.520	0.150	0.0199	0.0014	0.98	360.0	84.0	126.8	8.7	1520.0	330.0	DISC	DISC	91.7
11UCCF02_98	340.00	1.14	0.122	0.002	0.0179	0.0002	0.46	116.6	2.0	114.2	1.4	175.0	22.0	114.2	1.4	2.1
11UCCF02_99	64.00	1.65	0.728	0.012	0.0908	0.0010	0.11	555.1	7.1	560.3	5.7	548.0	24.0	560.3	5.7	0.9
11UCCF02_100	87.40	1.28	0.832	0.011	0.0966	0.0014	0.24	614.5	6.1	594.1	8.4	692.0	25.0	594.1	8.4	3.3
11UCCF02_101	57.00	0.67	2.929	0.022	0.2514	0.0017	0.49	1389.8	5.7	1445.8	8.8	1302.6	9.6	1302.6	9.6	11.0
11UCCF02_102	176.60	0.86	2.944	0.017	0.2497	0.0015	0.28	1393.0	4.3	1437.1	7.8	1327.2	9.4	1327.2	9.4	8.3
11UCCF02_103	102.90	1.48	1.748	0.017	0.1728	0.0016	0.56	1026.9	6.0	1027.5	8.9	1031.7	9.2	1027.5	8.9	0.1
11UCCF02_104	43.60	1.38	3.945	0.043	0.2833	0.0032	0.71	1623.6	8.5	1608.0	16.0	1649.0	11.0	1649.0	11.0	2.5
11UCCF02_105	156.10	1.83	5.992	0.049	0.3439	0.0031	0.60	1974.2	7.1	1905.0	15.0	2051.5	6.6	2051.5	6.6	7.1
11UCCF02_106	54.30	0.45	4.084	0.063	0.2937	0.0050	0.88	1651.0	13.0	1659.0	25.0	1634.2	8.4	1634.2	8.4	1.5
11UCCF02_107	130.40	0.76	4.100	0.035	0.2923	0.0033	0.89	1654.0	7.1	1653.0	17.0	1657.6	7.0	1657.6	7.0	0.3
11UCCF02_108	150.00	1.38	2.816	0.022	0.2378	0.0019	0.36	1360.2	5.6	1375.0	10.0	1339.0	10.0	1339.0	10.0	2.7
11UCCF02_109	263.00	7.81	0.655	0.005	0.0835	0.0006	0.30	511.7	3.2	517.0	3.6	493.0	11.0	517.0	3.6	1.0
11UCCF02_110	324.80	0.63	2.082	0.031	0.1891	0.0021	0.77	1142.0	10.0	1116.0	11.0	1189.4	8.0	1116.0	11.0	2.3
11UCCF02_111	151.60	1.54	2.263	0.017	0.2090	0.0014	0.42	1200.4	5.4	1223.5	7.6	1166.1	9.6	1166.1	7.6	1.9
11UCCF02_112	132.80	0.84	4.536	0.035	0.3180	0.0025	0.79	1737.3	6.5	1780.0	12.0	1693.9	6.8	1693.9	6.8	5.1
11UCCF02_113	116.80	6.97	2.063	0.023	0.1980	0.0016	0.41	1137.7	8.0	1164.6	8.6	1076.0	12.0	1164.6	8.6	2.4
11UCCF02_114	92.69	0.67	2.021	0.018	0.1955	0.0013	0.47	1123.1	6.1	1150.8	7.2	1064.4	9.6	1150.8	7.2	2.5
11UCCF02_115	86.10	1.52	2.379	0.034	0.2094	0.0028	0.77	1236.6	9.9	1225.0	15.0	1265.0	12.0	1265.0	12.0	3.2
11UCCF02_116	490.00	0.91	0.634	0.007	0.0769	0.0005	0.21	498.5	4.1	478.7	3.3	578.0	24.0	478.7	3.3	4.0
11UCCF02_117	21.37	1.78	2.289	0.043	0.2037	0.0032	0.63	1207.0	13.0	1195.0	17.0	1237.0	18.0	1195.0	17.0	1.0
11UCCF02_118	200.50	1.27	6.780	0.033	0.3855	0.0023	0.48	2083.0	4.3	2102.0	11.0	2067.9	6.4	2067.9	6.4	1.6
11UCCF02_119	505.70	2.25	2.361	0.021	0.2144	0.0018	0.43	1230.9	6.4	1252.3	9.7	1191.0	11.0	1191.0	9.7	1.7

11UCCF02_120	64.1	1.191	0.494	0.010	0.0659	0.0007	0.025706	407.2	7.2	411.3	4.2	392.0	34.0	411.3	4.2	1.0
13DQDU_1	289.00	1.48	0.105	0.002	0.0159	0.0002	0.21	101.6	2.0	101.4	1.4	152.0	21.0	101.4	1.4	0.2
13DQDU_2	341.00	1.06	0.941	0.008	0.1104	0.0008	0.48	673.7	4.2	674.9	4.9	666.0	9.8	674.9	4.9	0.2
13DQDU_3	125.50	1.11	0.233	0.005	0.0332	0.0004	0.09	212.9	3.8	210.6	2.6	229.0	29.0	210.6	2.6	1.1
13DQDU_4	44.40	1.35	2.114	0.031	0.1930	0.0024	0.45	1152.0	10.0	1137.0	13.0	1197.0	14.0	1137.0	13.0	1.3
13DQDU_5	127.40	0.76	0.881	0.011	0.1056	0.0011	0.23	642.8	5.7	647.2	6.3	624.0	16.0	647.2	6.3	0.7
13DQDU_6	123.80	0.54	5.004	0.042	0.3201	0.0029	0.50	1819.6	7.1	1790.0	14.0	1835.1	8.9	1835.1	8.9	2.5
13DQDU_7	182.00	1.67	2.176	0.021	0.1967	0.0019	0.54	1172.9	6.8	1158.0	10.0	1189.0	13.0	1158.0	10.0	1.3
13DQDU_8	171.00	0.90	4.291	0.032	0.3022	0.0020	0.52	1691.3	6.1	1701.9	9.9	1681.0	7.0	1681.0	7.0	1.2
13DQDU_9	80.10	1.07	1.707	0.019	0.1644	0.0021	0.34	1011.7	6.9	981.0	12.0	1083.0	16.0	981.0	12.0	3.0
13DQDU_10	150.90	1.17	5.591	0.041	0.3447	0.0026	0.47	1914.3	6.3	1911.0	13.0	1924.8	7.5	1924.8	7.5	0.7
13DQDU_11	156.00	1.15	0.901	0.014	0.1080	0.0013	0.40	652.0	7.6	661.0	7.8	643.0	18.0	661.0	7.8	1.4
13DQDU_12	30.60	0.54	1.661	0.035	0.1600	0.0020	0.19	994.0	13.0	957.0	11.0	1074.0	25.0	957.0	11.0	3.7
13DQDU_13	164.00	1.97	1.868	0.021	0.1765	0.0016	0.66	1069.2	7.6	1047.6	8.8	1103.0	11.0	1047.6	8.8	2.0
13DQDU_14	617.00	0.65	0.450	0.027	0.0486	0.0006	0.17	375.0	18.0	305.8	3.4	797.0	94.0	305.8	3.4	18.5
13DQDU_15	35.18	2.18	4.487	0.077	0.2802	0.0048	0.62	1727.0	14.0	1592.0	24.0	1894.0	18.0	1894.0	18.0	15.9
13DQDU_16	116.60	1.83	1.585	0.020	0.1554	0.0014	0.39	963.8	7.7	931.0	8.1	1037.0	15.0	931.0	8.1	3.4
13DQDU_17	124.00	1.83	0.668	0.011	0.0773	0.0009	0.35	519.1	6.4	479.8	5.6	682.0	21.0	479.8	5.6	7.6
13DQDU_18	39.90	1.26	0.854	0.085	0.0723	0.0027	0.11	620.0	41.0	450.0	16.0	1300.0	140.0	450.0	16.0	27.4
13DQDU_19	211.70	1.74	4.371	0.040	0.2892	0.0025	0.67	1706.4	7.7	1637.0	12.0	1795.4	6.1	1795.4	6.1	8.8
13DQDU_20	67.60	2.17	5.152	0.047	0.3184	0.0027	0.55	1844.2	7.8	1781.0	13.0	1917.0	8.9	1917.0	8.9	7.1
13DQDU_21	413.30	6.36	1.444	0.013	0.1492	0.0015	0.70	907.0	5.6	896.4	8.4	935.2	8.9	896.4	8.4	1.2
13DQDU_23	67.20	1.18	1.925	0.025	0.1685	0.0017	0.46	1089.2	8.7	1004.0	9.6	1274.0	15.0	1004.0	9.6	7.8
13DQDU_24	79.20	0.87	2.699	0.040	0.2188	0.0034	0.70	1329.0	11.0	1275.0	18.0	1419.0	11.0	1419.0	11.0	10.1
13DQDU_25	55.50	1.22	2.231	0.028	0.1952	0.0020	0.46	1191.2	9.1	1149.0	11.0	1269.0	15.0	1149.0	11.0	3.5
13DQDU_26	20.70	1.51	1.927	0.043	0.1773	0.0026	0.18	1091.0	15.0	1052.0	14.0	1209.0	25.0	1052.0	14.0	3.6
13DQDU_27	452.00	2.18	0.511	0.011	0.0617	0.0007	0.70	419.8	7.6	386.1	4.5	609.0	28.0	386.1	4.5	8.0
13DQDU_27	93.00	1.18	0.608	0.028	0.0709	0.0017	0.30	488.0	21.0	442.0	10.0	674.0	92.0	442.0	10.0	9.4
13DQDU_28	95.00	1.26	1.830	0.023	0.1717	0.0020	0.56	1055.6	8.2	1021.0	11.0	1123.0	12.0	1021.0	11.0	3.3
13DQDU_30	120.90	0.92	0.779	0.012	0.0925	0.0010	0.51	585.3	6.9	570.0	6.1	652.0	16.0	570.0	6.1	2.6
13DQDU_31	32.10	2.14	2.413	0.048	0.1932	0.0038	0.03	1245.0	14.0	1138.0	20.0	1436.0	29.0	1138.0	20.0	8.6
13DQDU_29	260.00	4.00	0.785	0.033	0.0921	0.0012	0.67	586.0	17.0	568.2	7.2	642.0	47.0	568.2	7.2	3.0
13DQDU_32	90.30	1.32	1.410	0.022	0.1377	0.0022	0.70	892.8	9.2	832.0	12.0	1036.0	15.0	832.0	12.0	6.8

13DQDU_33	61.60	1.18	1.751	0.032	0.1675	0.0025	0.65	1030.0	11.0	998.0	14.0	1121.0	19.0	998.0	14.0	3.1
13DQDU_34	100.00	0.97	6.541	0.062	0.3676	0.0039	0.69	2050.8	8.4	2020.0	19.0	2080.0	11.0	2080.0	11.0	2.9
13DQDU_36	85.40	1.03	5.041	0.048	0.3176	0.0030	0.43	1826.6	8.2	1778.0	14.0	1875.0	13.0	1875.0	13.0	5.2
13DQDU_37	389.00	1.10	1.913	0.018	0.1818	0.0017	0.66	1085.4	6.3	1076.9	9.4	1102.5	8.5	1076.9	9.4	0.8
13DQDU_38	159.00	0.87	1.862	0.017	0.1792	0.0016	0.56	1067.4	6.0	1062.3	8.5	1087.0	8.6	1062.3	8.5	0.5
13DQDU_39	70.00	0.50	2.157	0.032	0.1915	0.0021	0.57	1168.0	10.0	1129.0	11.0	1232.0	17.0	1129.0	11.0	3.3
13DQDU_40	221.00	0.42	3.838	0.049	0.2769	0.0033	0.80	1600.0	10.0	1576.0	16.0	1627.9	8.7	1627.9	8.7	3.2
13DQDU_41	487.00	1.41	0.531	0.012	0.0570	0.0009	0.20	432.0	7.8	357.5	5.7	878.0	54.0	357.5	5.7	17.2
13DQDU_42	108.30	1.89	2.024	0.022	0.1894	0.0019	0.47	1124.0	7.1	1118.0	10.0	1156.0	13.0	1118.0	10.0	0.5
13DQDU_43	65.30	1.15	3.278	0.062	0.2322	0.0041	0.77	1475.0	15.0	1346.0	22.0	1681.0	15.0	1681.0	15.0	19.9
13DQDU_44	262.80	0.70	0.353	0.004	0.0484	0.0005	0.40	306.5	3.2	304.8	3.3	315.0	19.0	304.8	3.3	0.6
13DQDU_45	106.20	1.11	1.756	0.015	0.1690	0.0012	0.40	1030.5	5.7	1006.4	6.6	1076.0	10.0	1006.4	6.6	2.3
13DQDU_47	638.00	28.44	0.476	0.005	0.0627	0.0006	0.66	396.0	3.1	391.8	3.7	404.0	12.0	391.8	3.7	1.1
13DQDU_48	397.00	1.18	0.810	0.011	0.0979	0.0012	0.64	602.2	6.4	601.9	7.1	600.0	12.0	601.9	7.1	0.0
13DQDU_49	231.00	0.69	2.646	0.028	0.2125	0.0026	0.80	1314.5	8.1	1242.0	14.0	1431.3	8.9	1431.3	8.9	13.2
13DQDU_50	320.00	1.84	4.401	0.098	0.2977	0.0037	0.72	1713.0	19.0	1679.0	18.0	1765.0	25.0	1765.0	25.0	4.9
13DQDU_51	173.50	1.77	0.554	0.007	0.0720	0.0010	0.22	448.4	4.5	447.9	6.0	463.0	22.0	447.9	6.0	0.1
13DQDU_53	165.00	2.17	0.390	0.006	0.0529	0.0007	0.29	334.2	4.1	332.3	4.5	363.0	25.0	332.3	4.5	0.6
13DQDU_54	158.70	1.29	1.846	0.026	0.1790	0.0028	0.83	1061.2	9.4	1061.0	15.0	1077.0	13.0	1061.0	15.0	0.0
13DQDU_55	384.00	1.29	0.502	0.010	0.0553	0.0008	0.61	412.5	6.5	346.8	4.8	812.0	23.0	346.8	4.8	15.9
13DQDU_56	182.00	1.45	1.746	0.020	0.1698	0.0019	0.52	1025.3	7.4	1011.0	11.0	1056.0	15.0	1011.0	11.0	1.4
13DQDU_58	491.00	2.01	2.729	0.020	0.2302	0.0021	0.73	1336.1	5.6	1335.0	11.0	1334.7	9.5	1334.7	9.5	0.0
13DQDU_59	75.20	2.81	12.190	0.140	0.4728	0.0060	0.78	2619.0	10.0	2495.0	26.0	2711.2	6.5	2711.2	6.5	8.0
13DQDU_60	74.30	1.07	0.805	0.014	0.0959	0.0014	0.28	598.9	7.9	590.2	8.0	632.0	24.0	590.2	8.0	1.5
13DQDU_61	68.30	1.45	3.106	0.060	0.2486	0.0033	0.08	1433.0	15.0	1431.0	17.0	1448.0	30.0	1448.0	30.0	1.2
13DQDU_62	123.90	2.50	0.617	0.009	0.0780	0.0011	0.42	488.3	5.7	484.1	6.4	499.0	19.0	484.1	6.4	0.9
13DQDU_63	298.50	7.74	1.664	0.016	0.1668	0.0017	0.61	994.8	5.9	995.4	9.4	996.1	8.8	995.4	9.4	0.1
13DQDU_64	302.00	1.19	0.109	0.002	0.0162	0.0002	0.18	104.9	1.9	103.3	1.2	213.0	30.0	103.3	1.2	1.5
13DQDU_65	230.00	5.05	0.803	0.010	0.0962	0.0012	0.62	598.2	5.5	591.9	6.9	627.0	11.0	591.9	6.9	1.1
13DQDU_66	213.00	10.16	0.810	0.017	0.0980	0.0020	0.92	601.5	9.7	603.0	12.0	587.0	15.0	603.0	12.0	0.2
13DQDU_67	36.20	0.78	1.862	0.034	0.1729	0.0030	0.07	1066.0	12.0	1028.0	17.0	1161.0	31.0	1028.0	17.0	3.6
13DQDU_68	21.60	1.11	1.578	0.044	0.1460	0.0022	0.42	959.0	18.0	880.0	12.0	1137.0	29.0	880.0	12.0	8.2
13DQDU_69	79.60	1.34	1.716	0.024	0.1624	0.0018	0.58	1015.2	8.9	969.7	9.7	1113.0	14.0	969.7	9.7	4.5
13DQDU_71	235.00	1.28	0.526	0.007	0.0690	0.0006	0.34	429.2	4.7	429.8	3.5	433.0	13.0	429.8	3.5	0.1
13DQDU_72	152.00	1.79	0.469	0.009	0.0613	0.0010	0.52	390.1	6.4	383.4	5.8	414.0	20.0	383.4	5.8	1.7

13DQDU_73	68.90	0.63	0.486	0.026	0.0598	0.0009	0.22	400.0	16.0	374.2	5.2	529.0	57.0	374.2	5.2	6.5
13DQDU_74	223.80	3.47	3.329	0.039	0.2275	0.0034	0.72	1487.4	9.2	1321.0	18.0	1741.0	14.0	1741.0	14.0	24.1
13DQDU_75	185.00	1.16	0.660	0.008	0.0830	0.0009	0.27	514.3	4.9	513.6	5.3	519.0	16.0	513.6	5.3	0.1
13DQDU_76	103.50	3.01	0.476	0.007	0.0604	0.0007	0.20	394.9	4.8	377.9	4.3	479.0	29.0	377.9	4.3	4.3
13DQDU_77	163.00	1.16	0.477	0.009	0.0609	0.0013	0.57	395.3	6.1	380.7	8.1	527.0	33.0	380.7	8.1	3.7
13DQDU_78	69.90	0.77	4.566	0.042	0.2997	0.0029	0.56	1743.7	7.9	1689.0	14.0	1810.2	8.3	1810.2	8.3	6.7
13DQDU_79	192.00	1.39	3.032	0.029	0.2392	0.0020	0.54	1415.2	7.3	1382.0	10.0	1469.2	9.0	1469.2	9.0	5.9
13DQDU_80	34.30	2.10	2.005	0.034	0.1832	0.0022	0.20	1118.0	11.0	1084.0	12.0	1163.0	22.0	1084.0	12.0	3.0
13DQDU_81	63.50	0.81	3.316	0.036	0.2312	0.0024	0.55	1484.2	8.4	1341.0	12.0	1708.0	12.0	1708.0	12.0	21.5
13DQDU_83	224.00	1.47	0.109	0.004	0.0144	0.0002	0.11	105.1	3.6	92.3	1.4	383.0	49.0	92.3	1.4	12.2
13DQDU_84	127.00	1.77	1.841	0.021	0.1729	0.0014	0.42	1059.8	7.6	1027.9	7.9	1126.0	13.0	1027.9	7.9	3.0
13DQDU_85	140.90	0.39	0.646	0.011	0.0787	0.0009	0.41	506.4	6.4	488.6	5.3	585.0	16.0	488.6	5.3	3.5
13DQDU_86	165.70	1.84	4.044	0.026	0.2829	0.0025	0.46	1642.8	5.1	1606.0	12.0	1688.0	11.0	1688.0	11.0	4.9
13DQDU_88	35.00	1.07	1.702	0.028	0.1626	0.0023	0.11	1008.0	11.0	971.0	13.0	1062.0	28.0	971.0	13.0	3.7
13DQDU_89	165.60	1.65	1.801	0.018	0.1732	0.0015	0.53	1046.4	6.2	1029.7	8.4	1076.0	10.0	1029.7	8.4	1.6
13DQDU_90	137.10	1.73	4.009	0.031	0.2781	0.0018	0.45	1635.7	6.3	1583.0	9.4	1708.2	8.1	1708.2	8.1	7.3
13DQDU_91	148.70	2.89	4.426	0.041	0.2946	0.0035	0.80	1716.6	7.6	1664.0	17.0	1778.0	11.0	1778.0	11.0	6.4
13DQDU_92	110.60	0.83	5.287	0.048	0.3005	0.0033	0.68	1867.2	7.9	1694.0	16.0	2066.9	7.8	2066.9	7.8	18.0
13DQDU_93	117.30	0.87	0.358	0.006	0.0490	0.0007	0.20	310.3	4.7	308.4	4.0	327.0	25.0	308.4	4.0	0.6
13DQDU_94	164.80	1.11	1.417	0.011	0.1475	0.0014	0.44	896.0	4.8	887.1	7.7	916.0	13.0	887.1	7.7	1.0
13DQDU_95	53.10	1.99	14.480	0.240	0.4828	0.0087	0.72	2780.0	16.0	2538.0	38.0	2975.0	12.0	2975.0	12.0	14.7
13DQDU_96	104.80	1.37	2.804	0.026	0.2296	0.0024	0.54	1356.3	7.1	1332.0	13.0	1393.0	11.0	1393.0	11.0	4.4
13DQDU_97	124.30	0.65	0.699	0.009	0.0834	0.0011	0.13	539.4	5.3	516.2	6.3	614.0	23.0	516.2	6.3	4.3
13DQDU_98	53.60	0.55	12.560	0.140	0.4731	0.0053	0.67	2647.0	10.0	2496.0	23.0	2767.0	9.4	2767.0	9.4	9.8
13DQDU_99	200.00	1.12	0.917	0.073	0.1012	0.0015	0.74	642.0	22.0	621.2	8.7	719.0	77.0	621.2	8.7	3.2
13DQDU_101	94.70	1.33	1.889	0.023	0.1784	0.0017	0.53	1078.1	7.8	1058.1	9.6	1116.0	13.0	1058.1	9.6	1.9
13DQDU_102	182.50	1.20	0.689	0.069	0.0721	0.0008	0.66	521.0	35.0	448.8	5.0	790.0	130.0	448.8	5.0	13.9
13DQDU_103	187.60	2.45	1.806	0.022	0.1745	0.0021	0.72	1047.1	7.8	1037.0	12.0	1081.0	12.0	1037.0	12.0	1.0
13DQDU_104	135.00	0.86	0.390	0.007	0.0519	0.0006	0.14	334.6	5.4	326.2	3.9	388.0	28.0	326.2	3.9	2.5
13DQDU_105	23.56	1.43	1.694	0.036	0.1664	0.0035	0.51	1005.0	13.0	992.0	19.0	1027.0	22.0	992.0	19.0	1.3
13DQDU_106	205.00	1.15	3.903	0.032	0.2644	0.0025	0.73	1614.8	6.8	1512.0	13.0	1746.5	6.4	1746.5	6.4	13.4
13DQDU_107	30.89	0.94	1.858	0.032	0.1757	0.0023	0.29	1066.0	11.0	1043.0	13.0	1113.0	24.0	1043.0	13.0	2.2
13DQDU_108	222.00	3.08	1.666	0.014	0.1658	0.0014	0.61	995.6	5.2	988.9	7.9	1016.2	8.2	988.9	7.9	0.7
13DQDU_109	48.80	1.72	1.676	0.030	0.1604	0.0019	0.05	1000.0	11.0	959.0	10.0	1092.0	23.0	959.0	10.0	4.1
13DQDU_110	59.30	1.12	2.267	0.027	0.2022	0.0022	0.49	1201.3	8.5	1187.0	12.0	1238.0	13.0	1187.0	12.0	1.2

13DQDU_112	50.20	1.64	0.651	0.014	0.0762	0.0014	0.07	509.6	8.5	473.4	8.1	654.0	41.0	473.4	8.1	7.1
13DQDU_113	98.00	1.31	4.978	0.063	0.3070	0.0034	0.56	1816.0	10.0	1726.0	17.0	1929.0	10.0	1929.0	10.0	10.5
13DQDU_114	253.00	3.17	4.270	0.077	0.2902	0.0053	0.95	1686.0	15.0	1642.0	27.0	1757.0	14.0	1757.0	14.0	6.5
13DQDU_115	51.05	0.43	8.317	0.077	0.3920	0.0043	0.53	2265.7	8.4	2135.0	19.0	2385.0	7.2	2385.0	7.2	10.5
13DQDU_116	271.00	1.29	1.784	0.018	0.1744	0.0023	0.64	1039.3	6.7	1036.0	13.0	1059.0	13.0	1036.0	13.0	0.3
13DQDU_117	185.00	0.95	0.736	0.008	0.0892	0.0009	0.56	559.7	4.6	551.0	5.3	593.0	14.0	551.0	5.3	1.6
13DQDU_118	238.00	1.43	6.817	0.064	0.3664	0.0036	0.79	2089.6	8.6	2012.0	17.0	2161.4	5.5	2161.4	5.5	6.9
13DQDU_119	385.40	1.65	1.951	0.017	0.1873	0.0017	0.58	1098.4	5.8	1106.7	9.3	1086.8	9.8	1106.7	9.3	0.8
13DQDU_120	84.00	1.18	1.456	0.031	0.1486	0.0027	0.63	912.0	13.0	893.0	15.0	962.0	20.0	893.0	15.0	2.1
13DQDU_121	171.00	2.19	1.679	0.025	0.1620	0.0015	0.40	999.9	9.3	967.8	8.5	1077.0	20.0	967.8	8.5	3.2

Table 2a: Euhedral Zircon Grains: Maximum Depositional Age

Sample Name:								**207/235**		**206/238**		**206/207**		**Best age**		
Grain #	**[U] ppm**	**U/Th**	**207/235**	**2σ error**	**206/238**	**2σ error**	**RHO**	**Age Ma**	**2σ error**	**Age (Ma)**	**2σ error**	**Age (Ma)**	**2σ error**	**(Ma)**	**2σ error**	**% Discordance***
EBUCKHORN1	59.6	0.572	0.348	0.019	0.0462	0.0015	0.11989	302.0	14.0	290.8	9.5	420.0	130.0	290.8	9.5	3.7
EBUCKHORN2	4.2	1.109	0.165	0.005	0.0247	0.0005	0.35027	154.5	3.9	157.2	3.3	120.0	62.0	157.2	3.3	1.7
EBUCKHORN3	41	1.706	2.791	0.067	0.1885	0.0036	0.66002	1350.0	18.0	1113.0	20.0	1760.0	31.0	1113.0	20.0	17.6
EBUCKHORN4	36	1.204	3.655	0.084	0.2594	0.0067	0.78116	1559.0	18.0	1490.0	34.0	1650.0	32.0	1650.0	32.0	9.7
EBUCKHORN5	23	2.003	3.178	0.056	0.2553	0.0052	0.75906	1452.0	13.0	1465.0	27.0	1424.0	25.0	1424.0	25.0	2.9
EBUCKHORN6	2.8	0.841	0.179	0.004	0.0262	0.0006	0.56916	167.2	3.8	166.7	3.7	174.0	45.0	166.7	3.7	0.3
EBUCKHORN7	11	1.026	0.399	0.015	0.0494	0.0008	0.29731	340.0	11.0	310.9	4.7	538.0	81.0	310.9	4.7	8.6
EBUCKHORN8	9	0.847	0.222	0.009	0.0313	0.0009	0.052669	202.8	7.5	198.3	5.5	290.0	110.0	198.3	5.5	2.2
EBUCKHORN9	25	1.63	4.227	0.050	0.2956	0.0034	0.56848	1678.3	9.6	1669.0	17.0	1683.0	22.0	1683.0	22.0	0.8
EBUCKHORN10	6.5	0.597	0.163	0.010	0.0240	0.0005	0.21198	153.7	8.1	152.7	3.3	160.0	110.0	152.7	3.3	0.7
E11UPC05_1	38	2.34	2.052	0.038	0.1981	0.0038	0.56173	1133.0	13.0	1164.0	20.0	1088.0	32.0	1164.0	20.0	2.7
E11UPC05_2	23	1.999	3.205	0.030	0.2573	0.0030	0.65776	1457.9	7.2	1476.0	15.0	1459.0	17.0	1459.0	17.0	1.2
E11UPC05_3	35	2.03	1.876	0.039	0.1815	0.0041	0.66943	1071.0	14.0	1074.0	23.0	1076.0	32.0	1074.0	23.0	0.3
E11UPC05_5	21	2.034	3.158	0.038	0.2538	0.0031	0.76064	1446.0	9.3	1458.0	16.0	1434.0	17.0	1434.0	17.0	1.7

E11UPC05_6	31	0.997	2.888	0.047	0.2368	0.0040	0.59847	1377.0	12.0	1369.0	21.0	1392.0	28.0	1392.0	28.0	1.7
E11UPC05_8	22	2.258	3.188	0.035	0.2592	0.0026	0.55886	1453.5	8.4	1485.0	13.0	1414.0	18.0	1414.0	18.0	5.0
E11UPC05_9	21	1.596	1.968	0.044	0.1889	0.0048	0.70407	1104.0	15.0	1118.0	27.0	1080.0	39.0	1118.0	27.0	1.3
E11UPC05_10	29	1.145	2.908	0.037	0.2430	0.0039	0.44003	1384.4	9.5	1404.0	20.0	1363.0	29.0	1363.0	29.0	3.0
E11UPC05_11	29	2.269	3.930	0.110	0.2718	0.0095	0.77252	1618.0	24.0	1552.0	47.0	1691.0	40.0	1691.0	40.0	8.2
E11UPC05_12	42	1.2	2.635	0.054	0.2183	0.0052	0.49512	1310.0	15.0	1272.0	28.0	1361.0	40.0	1361.0	40.0	6.5
E11UPC06_1	27	1.987	3.132	0.039	0.2523	0.0038	0.59921	1442.5	9.7	1450.0	20.0	1453.0	23.0	1453.0	23.0	0.2
E11UPC06_2	44	1.888	2.893	0.043	0.2358	0.0033	0.36856	1379.0	11.0	1367.0	17.0	1407.0	30.0	1407.0	30.0	2.8
E11UPC06_3	31	1.561	3.262	0.061	0.2593	0.0055	0.58872	1470.0	15.0	1485.0	28.0	1439.0	31.0	1439.0	31.0	3.2
E11UPC06_4	34	2.6	1.967	0.040	0.1848	0.0026	0.54266	1104.0	14.0	1093.0	14.0	1142.0	36.0	1093.0	14.0	1.0
E11UPC06_5	15	1.972	0.534	0.015	0.0691	0.0012	0.50262	437.0	10.0	430.6	7.1	463.0	55.0	430.6	7.1	1.5
E11UPC06_6	29	2.35	4.423	0.042	0.3092	0.0032	0.56519	1716.9	7.8	1736.0	16.0	1700.0	17.0	1700.0	17.0	2.1
E11UPC06_8	28	1.942	2.031	0.031	0.1893	0.0029	0.47228	1125.0	10.0	1117.0	16.0	1131.0	30.0	1117.0	16.0	0.7
E11UPC06_9	9.9	1.178	0.527	0.011	0.0695	0.0011	0.25191	429.6	7.3	433.4	6.9	439.0	55.0	433.4	6.9	0.9
E11UPC06_10	110	18.17	0.524	0.015	0.0652	0.0010	0.17955	431.0	11.0	407.0	6.1	551.0	72.0	407.0	6.1	5.6
E11UPC06_11	32	2.006	3.164	0.065	0.2539	0.0048	0.85024	1452.0	17.0	1458.0	24.0	1456.0	24.0	1456.0	24.0	0.1
E11UPC06_12	44	1.173	4.384	0.085	0.3034	0.0052	0.44373	1710.0	16.0	1708.0	26.0	1721.0	33.0	1721.0	33.0	0.8
E11UPC07_1	10	2.78	0.522	0.012	0.0685	0.0019	0.71841	425.7	8.3	427.0	12.0	428.0	43.0	427.0	12.0	0.3
E11UPC07_2	23	1.393	3.169	0.063	0.2537	0.0059	0.74384	1449.0	15.0	1456.0	30.0	1437.0	28.0	1437.0	28.0	1.3
E11UPC07_3	14	1.409	0.562	0.012	0.0738	0.0015	0.57345	453.4	7.7	459.1	8.9	426.0	44.0	459.1	8.9	1.3
E11UPC07_4	18	1.896	0.573	0.012	0.0732	0.0013	0.20347	460.4	7.8	455.6	7.6	467.0	57.0	455.6	7.6	1.0
E11UPC07_5	26	1.231	2.936	0.038	0.2427	0.0035	0.54571	1391.6	9.9	1400.0	18.0	1393.0	26.0	1393.0	26.0	0.5
E11UPC07_6	19	4.57	0.558	0.012	0.0729	0.0013	0.39321	449.5	7.5	453.4	7.7	473.0	48.0	453.4	7.7	0.9
E11UPC07_7	51	2.524	4.102	0.059	0.2876	0.0052	0.61641	1655.0	12.0	1632.0	26.0	1696.0	26.0	1696.0	26.0	3.8
E11UPC07_8	9.3	0.953	0.522	0.010	0.0692	0.0012	0.48958	426.3	6.5	431.5	7.3	439.0	38.0	431.5	7.3	1.2
E11UPC07_9	130	8.4	1.507	0.053	0.1473	0.0042	0.38898	931.0	21.0	886.0	24.0	1098.0	85.0	886.0	24.0	4.8
E11UPC07_10	21	4.82	0.557	0.017	0.0736	0.0022	0.64565	448.0	11.0	458.0	13.0	392.0	55.0	458.0	13.0	2.2
E11UPC07_11	15	1.171	0.621	0.019	0.0762	0.0022	0.80075	489.0	12.0	473.0	13.0	568.0	43.0	473.0	13.0	3.3

E11UPC07_12	35	1.152	4.225	0.076	0.2944	0.0057	0.84408	1679.0	15.0	1662.0	28.0	1699.0	20.0	1699.0	20.0	2.2
E11UPC08_1	21	3.397	1.998	0.023	0.1930	0.0026	0.50142	1114.2	7.7	1137.0	14.0	1067.0	25.0	1137.0	14.0	2.0
E11UPC08_2	63	2.43	5.240	0.100	0.3435	0.0064	0.76234	1860.0	16.0	1903.0	30.0	1800.0	27.0	1800.0	27.0	5.7
E11UPC08_3	32	1.708	1.988	0.040	0.1908	0.0027	0.49504	1110.0	14.0	1125.0	15.0	1093.0	37.0	1125.0	15.0	1.4
E11UPC08_4	62	2.564	2.918	0.071	0.2362	0.0057	0.80451	1392.0	18.0	1369.0	29.0	1408.0	28.0	1408.0	28.0	2.8
E11UPC08_5	89	11.01	4.726	0.093	0.3229	0.0075	0.49382	1773.0	16.0	1802.0	36.0	1718.0	38.0	1718.0	38.0	4.9
E11UPC08_6	73	4.98	4.790	0.180	0.3200	0.0110	0.94245	1773.0	31.0	1783.0	56.0	1748.0	21.0	1748.0	21.0	2.0
E11UPC08_7	46	2.89	13.190	0.150	0.5228	0.0074	0.74603	2695.0	11.0	2713.0	32.0	2661.0	15.0	2661.0	15.0	2.0
E11UPC08_8	71	1.407	11.690	0.210	0.4600	0.0110	0.71705	2578.0	17.0	2437.0	48.0	2673.0	26.0	2673.0	26.0	8.8
E11UPC08_9	63	1.88	4.700	0.100	0.3117	0.0090	0.74399	1765.0	19.0	1747.0	44.0	1783.0	33.0	1783.0	33.0	2.0
E11UPC08_10	42	2.389	3.046	0.068	0.2421	0.0058	0.77952	1417.0	17.0	1396.0	30.0	1452.0	25.0	1452.0	25.0	3.9
E11UPC08_12	40	0.798	5.167	0.099	0.3397	0.0072	0.7449	1847.0	17.0	1888.0	35.0	1804.0	25.0	1804.0	25.0	4.7
E11UPC09_1	76	5.63	2.921	0.082	0.2401	0.0076	0.63663	1390.0	22.0	1386.0	40.0	1387.0	46.0	1387.0	46.0	0.1
E11UPC09_2	37	4.435	2.208	0.044	0.2058	0.0039	0.84638	1182.0	14.0	1209.0	22.0	1155.0	30.0	1155.0	22.0	2.3
E11UPC09_3	22	1.278	1.989	0.031	0.1919	0.0030	0.35732	1113.0	10.0	1133.0	16.0	1043.0	34.0	1133.0	16.0	1.8
E11UPC09_4	81	5.94	4.750	0.110	0.3132	0.0075	0.87352	1779.0	19.0	1759.0	37.0	1787.0	22.0	1787.0	22.0	1.6
E11UPC09_5	51	4.08	5.598	0.083	0.3744	0.0067	0.78092	1914.0	13.0	2052.0	32.0	1763.0	20.0	1763.0	20.0	16.4
E11UPC09_6	20	1.877	2.005	0.029	0.1870	0.0023	0.4812	1117.5	9.9	1105.0	13.0	1107.0	27.0	1105.0	13.0	1.1
E11UPC09_7	34	2.232	3.387	0.044	0.2719	0.0037	0.62243	1500.0	10.0	1550.0	19.0	1418.0	22.0	1418.0	22.0	9.3
E11UPC09_8	20	1.91	1.963	0.029	0.1887	0.0026	0.73657	1102.0	10.0	1114.0	14.0	1082.0	22.0	1114.0	14.0	1.1
E11UPC09_9	27	3.71	1.265	0.045	0.1230	0.0045	0.83285	829.0	20.0	747.0	26.0	1064.0	35.0	747.0	26.0	9.9
E11UPC09_10	3.8	1.263	0.097	0.004	0.0146	0.0004	0.1519	93.5	3.4	93.7	2.5	101.0	83.0	93.7	2.5	0.2
E11UPC09_11	73	2.04	2.049	0.070	0.1949	0.0064	0.69105	1127.0	22.0	1146.0	34.0	1058.0	48.0	1146.0	34.0	1.7
E11UPC09_12	39	4.1	1.892	0.048	0.1843	0.0040	0.31624	1072.0	15.0	1089.0	22.0	1042.0	45.0	1089.0	22.0	1.6
E11UPC09_13	24	1.21	1.975	0.035	0.1889	0.0033	0.45293	1110.0	12.0	1115.0	18.0	1081.0	34.0	1115.0	18.0	0.5
E11UPC10_1	31	2.508	3.074	0.062	0.2438	0.0053	0.76818	1424.0	16.0	1405.0	28.0	1441.0	25.0	1441.0	25.0	2.5
E11UPC10_2	27	2.019	4.456	0.075	0.3101	0.0069	0.67424	1723.0	14.0	1739.0	34.0	1679.0	32.0	1679.0	32.0	3.6

E11UPC10_3	23	1.698	0.652	0.025	0.0808	0.0034	0.63731	508.0	15.0	500.0	20.0	567.0	73.0	500.0	20.0	1.6
E11UPC10_4	49	1.672	4.389	0.092	0.3036	0.0083	0.74907	1707.0	17.0	1707.0	41.0	1706.0	33.0	1706.0	33.0	0.1
E11UPC10_5	110	17.2	0.628	0.032	0.0727	0.0031	0.70505	493.0	20.0	452.0	19.0	658.0	79.0	452.0	19.0	8.3
E11UPC10_6	40	1.084	3.070	0.100	0.2406	0.0085	0.40161	1420.0	25.0	1392.0	43.0	1448.0	54.0	1448.0	54.0	3.9
E11UPC10_7	64	2.691	5.090	0.120	0.3377	0.0097	0.56505	1839.0	19.0	1872.0	47.0	1781.0	49.0	1781.0	49.0	5.1
E11UPC10_8	23	2.54	0.613	0.015	0.0783	0.0018	0.55147	484.6	9.2	486.0	11.0	476.0	49.0	486.0	11.0	0.3
E11UPC10_9	42	2.63	4.318	0.079	0.3002	0.0048	0.76472	1695.0	15.0	1691.0	24.0	1693.0	22.0	1693.0	22.0	0.1
E11UPC10_10	22	3.66	1.875	0.027	0.1810	0.0031	0.64919	1071.5	9.7	1072.0	17.0	1035.0	26.0	1072.0	17.0	0.0
E13GPI01_1	7.4	3.15	0.186	0.004	0.0270	0.0005	0.40949	173.3	3.8	172.0	2.9	189.0	49.0	172.0	2.9	0.8
E13GPI01_2	32	1.811	2.979	0.051	0.2437	0.0035	0.43789	1403.0	13.0	1405.0	18.0	1420.0	33.0	1420.0	33.0	1.1
E13GPI01_3	2.7	1.182	0.102	0.004	0.0154	0.0004	0.63816	98.2	3.2	99.1	2.5	58.0	48.0	99.1	2.5	0.9
E13GPI01_5	9.4	1.856	0.175	0.009	0.0263	0.0007	0.25052	163.6	7.4	167.5	4.5	89.0	93.0	167.5	4.5	2.4
E13GPI01_6	4	1.697	0.092	0.003	0.0140	0.0003	0.25805	89.4	2.7	89.4	1.9	96.0	65.0	89.4	1.9	0.0
E13GPI01_7	11	3.07	0.186	0.008	0.0276	0.0006	0.092614	173.9	6.7	175.6	3.9	133.0	96.0	175.6	3.9	1.0
E13GPI01_8	7.4	2.08	0.090	0.004	0.0137	0.0005	0.22868	87.8	3.8	87.4	3.4	100.0	120.0	87.4	3.4	0.5
E13GPI01_9	4.1	1.63	0.089	0.003	0.0132	0.0004	0.39082	86.1	2.4	84.4	2.2	86.0	59.0	84.4	2.2	2.0
E13GPI01_10	13	1.171	0.121	0.012	0.0166	0.0008	0.18683	115.0	11.0	105.9	5.0	320.0	220.0	105.9	5.0	7.9
E13GPI01_11	9.9	3.17	0.112	0.007	0.0160	0.0004	0.16414	107.3	6.0	102.1	2.8	200.0	150.0	102.1	2.8	4.8
E13GPI01_12	5.7	1.88	0.093	0.004	0.0137	0.0003	0.15291	91.2	3.8	88.0	2.0	150.0	100.0	88.0	2.0	3.5
E13GPI02_1	14	1.594	0.532	0.012	0.0707	0.0012	0.1728	432.8	8.0	440.6	7.2	418.0	56.0	440.6	7.2	1.8
E13GPI02_2	29	1.479	4.363	0.056	0.3034	0.0036	0.63753	1704.0	10.0	1708.0	18.0	1698.0	19.0	1698.0	19.0	0.6
E13GPI02_3	25	1.124	2.347	0.035	0.2099	0.0027	0.44578	1227.0	11.0	1228.0	14.0	1217.0	28.0	1217.0	28.0	0.9
E13GPI02_4	23	1.632	2.762	0.032	0.2313	0.0030	0.67391	1345.8	8.4	1341.0	16.0	1350.0	20.0	1350.0	20.0	0.7
E13GPI02_5	39	1.122	4.028	0.081	0.2943	0.0062	0.65291	1640.0	17.0	1666.0	31.0	1607.0	30.0	1607.0	30.0	3.7
E13GPI02_6	28	1.913	2.786	0.045	0.2323	0.0030	0.7465	1350.0	12.0	1346.0	16.0	1335.0	21.0	1335.0	21.0	0.8
E13GPI02_7	40	2.86	2.114	0.039	0.2020	0.0036	0.5223	1152.0	13.0	1186.0	19.0	1091.0	35.0	1186.0	19.0	3.0
E13GPI02_8	39	2.61	1.880	0.031	0.1805	0.0031	0.3595	1075.0	11.0	1074.0	17.0	1084.0	39.0	1074.0	17.0	0.1
E13GPI02_9	44	1.458	1.825	0.046	0.1757	0.0040	0.62666	1052.0	17.0	1043.0	22.0	1096.0	40.0	1043.0	22.0	0.9

E13GPI02_10	42	1.361	1.750	0.047	0.1702	0.0032	0.1783	1027.0	17.0	1013.0	18.0	1046.0	67.0	1013.0	18.0	1.4
E13GPI02_11	31	2.339	1.793	0.027	0.1769	0.0028	0.56349	1042.0	10.0	1050.0	15.0	1011.0	28.0	1050.0	15.0	0.8
E13GPI02_12	8.9	0.525	0.549	0.013	0.0704	0.0013	0.22814	445.0	8.8	438.7	7.8	417.0	59.0	438.7	7.8	1.4
E13GPI03_1	63	1.82	4.414	0.094	0.3097	0.0069	0.8027	1712.0	18.0	1738.0	34.0	1673.0	23.0	1673.0	23.0	3.9
E13GPI03_2	41	1.169	1.908	0.046	0.1796	0.0045	0.50618	1082.0	16.0	1064.0	24.0	1089.0	46.0	1064.0	24.0	1.7
E13GPI03_4	10	0.666	0.802	0.016	0.0949	0.0013	0.25848	598.8	8.6	584.4	7.5	585.0	47.0	584.4	7.5	2.4
E13GPI03_5	21	0.728	3.044	0.038	0.2439	0.0030	0.60436	1417.9	9.5	1407.0	16.0	1414.0	20.0	1414.0	20.0	0.5
E13GPI03_6	34	2.09	4.854	0.070	0.3340	0.0046	0.54141	1793.0	12.0	1861.0	23.0	1691.0	26.0	1691.0	26.0	10.1
E13GPI03_7	30	1.291	3.192	0.048	0.2536	0.0033	0.4069	1455.0	11.0	1457.0	17.0	1423.0	29.0	1423.0	29.0	2.4
E13GPI03_9	23	2.16	1.967	0.036	0.1855	0.0032	0.77253	1107.0	12.0	1099.0	17.0	1092.0	26.0	1099.0	17.0	0.7
E13GPI03_10	50	1.888	2.340	0.065	0.2157	0.0040	0.43541	1221.0	20.0	1258.0	21.0	1152.0	52.0	1152.0	21.0	3.0
E13GPI03_11	30	1.008	3.633	0.060	0.2765	0.0044	0.67526	1558.0	13.0	1573.0	22.0	1511.0	23.0	1511.0	23.0	4.1
E13GPI03_12	20	1.833	1.802	0.027	0.1710	0.0028	0.33293	1045.4	9.7	1017.0	15.0	1103.0	35.0	1017.0	15.0	2.7
E13GPI03_13	45	1.584	3.352	0.074	0.2656	0.0048	0.66082	1490.0	17.0	1521.0	25.0	1406.0	35.0	1406.0	35.0	8.2
E13GPI04_1	30	0.834	3.008	0.064	0.2464	0.0062	0.51523	1409.0	16.0	1418.0	32.0	1362.0	41.0	1362.0	41.0	4.1
E13GPI04_2	37	3.98	4.510	0.047	0.3168	0.0039	0.50249	1733.4	8.5	1773.0	19.0	1669.0	21.0	1669.0	21.0	6.2
E13GPI04_3	38	3.15	3.086	0.061	0.2495	0.0052	0.7309	1427.0	15.0	1435.0	27.0	1387.0	26.0	1387.0	26.0	3.5
E13GPI04_4	30	1.254	2.967	0.048	0.2455	0.0051	0.54422	1401.0	12.0	1414.0	27.0	1336.0	35.0	1336.0	35.0	5.8
E13GPI04_5	23	2.16	2.961	0.039	0.2349	0.0033	0.51279	1396.6	9.9	1362.0	17.0	1436.0	23.0	1436.0	23.0	5.2
E13GPI04_6	9.9	1.557	0.257	0.008	0.0365	0.0009	0.36115	232.6	6.3	230.8	5.6	211.0	74.0	230.8	5.6	0.8
E13GPI04_7	19	1.589	0.854	0.018	0.1033	0.0018	0.098063	626.1	9.7	633.0	11.0	577.0	51.0	633.0	11.0	1.1
E13GPI04_8	62	2.06	4.910	0.073	0.3247	0.0052	0.754	1802.0	12.0	1812.0	25.0	1800.0	21.0	1800.0	21.0	0.7
E13GPI04_9	10	1.887	0.321	0.009	0.0449	0.0008	0.070701	282.4	6.6	283.3	4.8	274.0	64.0	283.3	4.8	0.3
E13GPI04_10	50	4.12	5.071	0.072	0.3414	0.0065	0.63909	1831.0	12.0	1892.0	31.0	1772.0	25.0	1772.0	25.0	6.8
E13GPI04_11	37	1.569	1.983	0.039	0.1883	0.0033	0.38884	1111.0	13.0	1112.0	18.0	1075.0	44.0	1112.0	18.0	0.1
E13GPI04_12	44	2.41	2.860	0.045	0.2339	0.0038	0.59732	1370.0	12.0	1355.0	20.0	1384.0	30.0	1384.0	30.0	2.1
E13GPI05_1	3.5	1.71	0.095	0.004	0.0144	0.0002	0.21264	92.4	3.3	92.1	1.4	92.0	73.0	92.1	1.4	0.3

E13GPI05_2	29	1.561	0.836	0.020	0.0970	0.0021	0.40048	618.0	12.0	597.0	13.0	717.0	56.0	597.0	13.0	3.4
E13GPI05_3	32	1.552	2.932	0.049	0.2474	0.0045	0.53936	1391.0	13.0	1427.0	23.0	1350.0	32.0	1350.0	32.0	5.7
E13GPI05_4	22	6.06	0.628	0.011	0.0793	0.0012	0.49048	496.6	6.6	492.0	7.0	513.0	42.0	492.0	7.0	0.9
E13GPI05_5	3.9	2.032	0.096	0.003	0.0144	0.0003	0.12406	93.1	2.8	92.1	2.2	96.0	80.0	92.1	2.2	1.1
E13GPI05_6	27	2.69	4.998	0.073	0.3373	0.0057	0.74935	1817.0	12.0	1873.0	27.0	1750.0	19.0	1750.0	19.0	7.0
E13GPI05_7	25	2.178	3.139	0.040	0.2531	0.0031	0.51572	1442.6	9.6	1454.0	16.0	1425.0	23.0	1425.0	23.0	2.0
E13GPI05_8	8.3	10.66	0.095	0.004	0.0145	0.0004	0.44409	92.4	3.4	92.6	2.4	48.0	70.0	92.6	2.4	0.2
E13GPI05_9	7.7	3.323	0.114	0.005	0.0163	0.0005	0.06033	109.5	4.2	104.3	2.9	220.0	97.0	104.3	2.9	4.7
E13GPI05_10	22	1.417	0.110	0.019	0.0155	0.0008	0.096579	106.0	17.0	99.1	5.3	230.0	340.0	99.1	5.3	6.5
E13GPI05_11	19	13	0.374	0.010	0.0523	0.0011	0.53727	322.5	7.4	328.9	6.8	256.0	53.0	328.9	6.8	2.0
E13GPI05_12	19	0.924	3.152	0.040	0.2520	0.0033	0.58087	1445.6	9.5	1450.0	17.0	1421.0	22.0	1421.0	22.0	2.0
E13GPI06_1	21	1.409	3.254	0.042	0.2575	0.0036	0.68413	1469.0	10.0	1476.0	19.0	1439.0	21.0	1439.0	21.0	2.6
E13GPI06_2	7	1.06	0.306	0.007	0.0420	0.0012	0.68679	270.8	5.4	265.4	7.2	276.0	58.0	265.4	7.2	2.0
E13GPI06_3	7.8	2.635	0.179	0.006	0.0258	0.0007	0.27606	167.6	5.4	164.5	4.2	210.0	78.0	164.5	4.2	1.8
E13GPI06_4	31	6.9	1.559	0.029	0.1596	0.0035	0.59666	954.0	11.0	956.0	19.0	910.0	37.0	956.0	19.0	0.2
E13GPI06_5	18	1.789	0.551	0.016	0.0666	0.0021	0.41163	446.6	9.8	416.0	13.0	569.0	71.0	416.0	13.0	6.9
E13GPI06_6	23	1.938	3.073	0.065	0.2487	0.0065	0.71935	1425.0	16.0	1435.0	33.0	1393.0	36.0	1393.0	36.0	3.0
E13GPI06_7	8.2	0.692	0.246	0.010	0.0358	0.0011	0.23582	224.0	8.1	227.0	6.9	178.0	91.0	227.0	6.9	1.3
E13GPI06_8	5.5	1.308	0.237	0.007	0.0269	0.0005	0.37552	215.7	5.5	170.9	3.2	744.0	59.0	170.9	3.2	20.8
E13GPI06_9	8.9	1.345	0.118	0.010	0.0180	0.0008	0.16983	112.7	9.0	115.1	4.9	50.0	160.0	115.1	4.9	2.1
E13GPI06_10	28	8.77	0.184	0.010	0.0265	0.0011	0.063931	171.5	8.7	168.5	6.6	240.0	140.0	168.5	6.6	1.7
E13GPI06_11	37	2.504	2.333	0.060	0.2092	0.0056	0.76733	1219.0	18.0	1223.0	30.0	1230.0	36.0	1230.0	36.0	0.6
E13GPI06_12	13	1.059	0.176	0.008	0.0267	0.0009	0.3884	164.4	7.0	169.7	5.5	93.0	96.0	169.7	5.5	3.2
E13SM01_3	66	5.76	3.308	0.074	0.2311	0.0048	0.85649	1481.0	17.0	1343.0	26.0	1692.0	22.0	1692.0	22.0	20.6
E13SM01_4	26	0.694	3.141	0.049	0.2530	0.0045	0.65117	1441.0	12.0	1453.0	23.0	1417.0	29.0	1417.0	29.0	2.5
E13SM01_5	7.1	2.107	0.109	0.005	0.0162	0.0004	0.075617	104.8	4.5	103.6	2.6	120.0	100.0	103.6	2.6	1.1
E13SM01_6	33	2.062	2.880	0.043	0.2344	0.0034	0.34121	1376.0	11.0	1360.0	17.0	1404.0	29.0	1404.0	29.0	3.1
E13SM01_7	34	1.288	1.902	0.040	0.1833	0.0031	0.32542	1080.0	14.0	1084.0	17.0	1106.0	50.0	1084.0	17.0	0.4

E13SM01_8	69	25.1	4.565	0.065	0.3257	0.0049	0.68798	1743.0	12.0	1817.0	24.0	1679.0	21.0	1679.0	21.0	8.2
E13SM01_9	28	2.426	1.979	0.031	0.1885	0.0026	0.49684	1109.0	11.0	1113.0	14.0	1124.0	27.0	1113.0	14.0	0.4
E13SM01_10	26	1.163	2.272	0.074	0.1463	0.0053	0.91185	1205.0	23.0	886.0	30.0	1852.0	26.0	886.0	30.0	26.5
E13SM01_11	4.7	1.838	0.103	0.004	0.0155	0.0003	0.12384	99.5	3.3	99.3	2.1	129.0	80.0	99.3	2.1	0.2
E13SM02_1	3.7	1.298	0.075	0.004	0.0118	0.0002	0.11888	73.2	3.3	75.9	1.5	71.0	98.0	75.9	1.5	3.7
E13SM02_2	7.1	1.543	0.079	0.007	0.0113	0.0006	0.411	76.9	6.2	72.6	4.0	200.0	170.0	72.6	4.0	5.6
E13SM02_3	25	2.9	1.999	0.025	0.1937	0.0022	0.59515	1114.3	8.7	1141.0	12.0	1084.0	23.0	1141.0	12.0	2.4
E13SM02_4	2.8	1.733	0.108	0.004	0.0163	0.0004	0.45214	104.1	3.3	104.4	2.2	104.0	62.0	104.4	2.2	0.3
E13SM02_5	8.3	0.425	0.090	0.016	0.0132	0.0010	0.25971	86.0	15.0	84.5	6.3	140.0	290.0	84.5	6.3	1.7
E13SM02_6	30	1.53	1.896	0.035	0.1818	0.0030	0.23654	1081.0	12.0	1076.0	17.0	1089.0	45.0	1076.0	17.0	0.5
E13SM02_8	110	2.84	11.990	0.310	0.4880	0.0110	0.684	2604.0	25.0	2564.0	50.0	2642.0	31.0	2642.0	31.0	3.0
E13SM02_9	30	1.861	3.048	0.043	0.2433	0.0037	0.70211	1420.0	11.0	1403.0	19.0	1422.0	24.0	1422.0	24.0	1.3
E13SM02_10	28	2.114	1.933	0.028	0.1822	0.0026	0.18054	1091.6	9.8	1079.0	14.0	1117.0	40.0	1079.0	14.0	1.2
E13SM02_11	5.1	1.626	0.077	0.005	0.0116	0.0004	0.022344	75.0	4.4	74.1	2.4	110.0	130.0	74.1	2.4	1.2
E13SM02_12	41	8.25	4.599	0.053	0.3283	0.0040	0.75153	1751.0	10.0	1830.0	19.0	1651.0	17.0	1651.0	17.0	10.8
E13SM03_1	6.8	1.875	0.101	0.004	0.0151	0.0003	0.027801	97.8	3.5	96.4	2.2	82.0	95.0	96.4	2.2	1.4
E13SM03_2	4.6	1.05	0.096	0.005	0.0148	0.0004	0.073011	92.9	4.8	94.5	2.3	100.0	110.0	94.5	2.3	1.7
E13SM03_3	3.8	1.534	0.093	0.004	0.0143	0.0004	0.071047	90.3	3.7	91.4	2.4	80.0	110.0	91.4	2.4	1.2
E13SM03_4	2.2	1.42	0.103	0.003	0.0155	0.0004	0.60915	99.3	2.8	99.1	2.4	104.0	50.0	99.1	2.4	0.2
E13SM03_5	5.1	1.576	0.101	0.005	0.0149	0.0004	0.074289	97.8	4.2	95.6	2.6	190.0	110.0	95.6	2.6	2.2
E13SM03_6	2.9	1.426	0.095	0.003	0.0141	0.0003	0.32208	92.0	2.5	90.2	1.6	89.0	58.0	90.2	1.6	2.0
E13SM03_7	3.6	1.53	0.100	0.003	0.0149	0.0003	0.15479	96.8	3.1	95.2	1.8	129.0	76.0	95.2	1.8	1.7
E13SM03_8	3.3	1.212	0.099	0.004	0.0150	0.0004	0.46551	95.7	3.8	96.1	2.6	96.0	74.0	96.1	2.6	0.4
E13SM03_9	28	1.922	3.022	0.043	0.2468	0.0036	0.69931	1412.0	11.0	1427.0	18.0	1409.0	22.0	1409.0	22.0	1.3
E13SM03_10	4.3	1.432	0.095	0.004	0.0145	0.0003	0.04615	91.6	3.3	92.7	2.1	90.0	85.0	92.7	2.1	1.2
E13SM03_11	8.1	1.39	0.102	0.010	0.0153	0.0006	0.018635	98.0	9.2	98.1	4.0	80.0	190.0	98.1	4.0	0.1
E13SM03_12	4.5	1.212	0.093	0.004	0.0147	0.0004	0.24013	89.7	4.1	93.8	2.5	-3.0	92.0	93.8	2.5	4.6

E13SM04_1	4.6	0.958	0.102	0.007	0.0144	0.0005	0.021912	98.6	6.7	91.9	3.3	300.0	160.0	91.9	3.3	6.8
E13SM04_2	6.9	1.8	0.110	0.005	0.0163	0.0005	0.45989	105.3	4.5	104.3	3.4	118.0	83.0	104.3	3.4	0.9
E13SM04_3	3.5	2.94	0.102	0.003	0.0152	0.0003	0.42121	98.6	2.3	97.5	2.1	122.0	57.0	97.5	2.1	1.1
E13SM04_4	4.2	1.705	0.094	0.004	0.0145	0.0003	0.28474	90.9	3.9	92.8	2.1	101.0	91.0	92.8	2.1	2.1
E13SM04_5	4.2	2.44	0.104	0.004	0.0152	0.0004	0.035646	100.4	3.2	97.1	2.3	135.0	83.0	97.1	2.3	3.3
E13SM04_7	6.2	1.917	0.092	0.004	0.0132	0.0004	0.21599	89.0	4.0	84.3	2.3	250.0	110.0	84.3	2.3	5.3
E13SM04_8	5.8	1.028	0.108	0.006	0.0158	0.0005	0.10016	104.9	5.7	101.3	3.2	190.0	130.0	101.3	3.2	3.4
E13SM04_9	4.7	1.956	0.094	0.003	0.0141	0.0003	0.39444	91.2	3.0	90.4	2.2	89.0	71.0	90.4	2.2	0.9
E13SM04_10	5.8	1.945	0.094	0.004	0.0138	0.0003	0.17667	91.4	3.8	88.5	1.7	110.0	100.0	88.5	1.7	3.2
E13SM04_11	5.2	0.982	0.099	0.006	0.0141	0.0005	0.03546	96.0	5.7	90.5	2.8	180.0	140.0	90.5	2.8	5.7
E13SM04_12	3.5	1.384	0.098	0.004	0.0147	0.0003	0.046745	95.0	3.4	94.1	2.0	99.0	85.0	94.1	2.0	0.9

Table 2b: Zircon U-Pb Ages And Isotopic Data: Chapters 2 and 3

Table 2b: Price River Canyon, UT

Sample Name:								207/235		206/238		206/207		Best age		
Grain #	[U] ppm	U/Th	207/235	2σ error	206/238	2σ error	RHO	Age Ma	2σ error	Age (Ma)	2σ error	Age (Ma)	2σ error	(Ma)	2σ error	% Discordance*
13PRUC_1	243	0.5874	0.759	0.009	0.0937	0.0008	0.74452	573.0	5.4	577.2	4.6	543.0	21.0	577.2	4.6	0.7
13PRUC_2	118.7	0.98	8.650	0.150	0.4304	0.0057	0.96244	2300.0	17.0	2307.0	26.0	2276.0	17.0	2276.0	17.0	1.4
13PRUC_3	108.7	0.655	4.172	0.036	0.2985	0.0026	0.79656	1668.1	7.1	1684.0	13.0	1643.8	8.3	1643.8	8.3	2.4
13PRUC_4	18.99	0.823	4.115	0.095	0.2885	0.0064	0.97931	1656.0	19.0	1633.0	32.0	1683.0	23.0	1683.0	23.0	3.0
13PRUC_5	23.45	0.548	0.575	0.023	0.0720	0.0021	0.98059	459.0	15.0	448.0	13.0	570.0	43.0	448.0	13.0	2.4
13PRUC_6	32.9	1.269	4.653	0.051	0.3221	0.0029	0.87271	1758.1	9.3	1800.0	14.0	1711.0	13.0	1711.0	13.0	5.2
13PRUC_7	137	0.732	0.549	0.009	0.0720	0.0008	0.88898	443.9	6.0	448.1	4.6	432.0	20.0	448.1	4.6	0.9
13PRUC_8	115.1	1.438	1.974	0.020	0.1883	0.0021	0.83323	1108.1	7.2	1112.0	11.0	1086.0	15.0	1112.0	11.0	0.4
13PRUC_9	142.8	1.735	4.506	0.041	0.3095	0.0030	0.90204	1731.6	7.6	1738.0	15.0	1720.3	8.5	1720.3	8.5	1.0
13PRUC_10	122.1	1.208	2.412	0.095	0.2147	0.0025	0.78206	1243.0	26.0	1254.0	13.0	1234.0	56.0	1234.0	56.0	1.6
13PRUC_11	71.8	0.882	5.228	0.065	0.3354	0.0046	0.95171	1856.0	11.0	1864.0	22.0	1847.0	10.0	1847.0	10.0	0.9
13PRUC_12	318	1.077	2.063	0.014	0.1964	0.0014	0.7191	1136.5	4.6	1155.8	7.5	1096.0	8.8	1155.8	7.5	1.7
13PRUC_13	104	1.937	1.870	0.021	0.1839	0.0016	0.70975	1071.2	7.1	1088.3	8.8	1037.0	13.0	1088.3	8.8	1.6
13PRUC_14	34.69	0.69	1.912	0.031	0.1835	0.0023	0.88012	1084.0	11.0	1086.0	12.0	1087.0	22.0	1086.0	12.0	0.2
13PRUC_15	486	1.319	10.459	0.068	0.4660	0.0036	0.95159	2476.8	5.8	2466.0	16.0	2487.9	4.9	2487.9	4.9	0.9
13PRUC_16	27.9	0.5703	14.430	0.190	0.5405	0.0072	0.982	2777.0	13.0	2784.0	30.0	2764.0	11.0	2764.0	11.0	0.7
13PRUC_17	141.6	1.383	16.690	0.110	0.5889	0.0044	0.95322	2916.6	6.4	2985.0	18.0	2872.3	4.8	2872.3	4.8	3.9
13PRUC_18	58.8	0.523	1.476	0.056	0.1342	0.0047	0.9743	925.0	22.0	811.0	27.0	1188.0	43.0	811.0	27.0	12.3
13PRUC_18	30.59	0.5619	1.819	0.038	0.1738	0.0030	0.91498	1053.0	13.0	1033.0	16.0	1102.0	27.0	1033.0	16.0	1.9
13PRUC_19	116.7	0.973	4.117	0.034	0.2966	0.0024	0.87105	1657.3	6.9	1674.0	12.0	1637.9	7.8	1637.9	7.8	2.2
13PRUC_20	40.7	1.174	1.964	0.033	0.1861	0.0022	0.86356	1102.0	11.0	1100.0	12.0	1114.0	17.0	1100.0	12.0	0.2
13PRUC_21	279	6.51	0.519	0.015	0.0684	0.0019	0.66023	424.0	10.0	427.0	11.0	440.0	45.0	427.0	11.0	0.7
13PRUC_21	99.8	1.397	2.276	0.053	0.1965	0.0047	0.96935	1205.0	17.0	1156.0	25.0	1297.0	13.0	1156.0	25.0	4.1
13PRUC_22	42.3	0.7617	1.886	0.033	0.1805	0.0022	0.82891	1077.0	11.0	1069.0	12.0	1082.0	20.0	1069.0	12.0	0.7
13PRUC_23	106	32.4	1.799	0.040	0.1736	0.0027	0.79422	1044.0	15.0	1032.0	15.0	1099.0	29.0	1032.0	15.0	1.1
13PRUC_23	63.4	1.156	2.885	0.048	0.2122	0.0028	0.97294	1377.0	13.0	1240.0	15.0	1605.0	21.0	1605.0	21.0	22.7
13PRUC_24	224.1	1.085	4.140	0.045	0.2727	0.0036	0.96778	1661.9	9.0	1554.0	18.0	1805.0	10.0	1805.0	10.0	13.9

13PRUC_25	756	2.53	0.580	0.017	0.0575	0.0018	0.99992	464.0	11.0	361.0	11.0	996.0	35.0	361.0	11.0	22.2
13PRUC_25	110.7	0.839	4.004	0.091	0.2833	0.0050	0.92501	1634.0	18.0	1608.0	25.0	1641.0	16.0	1641.0	16.0	2.0
13PRUC_26	67.5	0.795	1.863	0.022	0.1827	0.0019	0.8698	1067.4	7.9	1081.0	10.0	1045.0	12.0	1081.0	10.0	1.3
13PRUC_27	506	105.2	0.497	0.005	0.0662	0.0005	0.61378	409.8	3.4	412.9	3.2	419.0	14.0	412.9	3.2	0.8
13PRUC_28	305	3.623	2.216	0.023	0.2062	0.0020	0.87425	1186.6	7.1	1208.0	11.0	1160.5	8.7	1160.5	11.0	1.8
13PRUC_29	111	0.93	4.769	0.039	0.3215	0.0031	0.87631	1779.1	6.8	1797.0	15.0	1770.5	9.8	1770.5	9.8	1.5
13PRUC_30	103.1	0.901	1.961	0.020	0.1887	0.0016	0.79939	1102.6	7.0	1114.1	8.5	1086.0	12.0	1114.1	8.5	1.0
13PRUC_31	48.6	1.152	2.593	0.041	0.2260	0.0033	0.87846	1298.0	12.0	1313.0	17.0	1299.0	21.0	1299.0	21.0	1.1
13PRUC_32	136	2.11	4.196	0.041	0.3058	0.0026	0.87611	1672.6	8.0	1720.0	13.0	1627.2	8.3	1627.2	8.3	5.7
13PRUC_33	130.1	1.132	2.098	0.016	0.1973	0.0016	0.72333	1148.6	5.2	1160.9	8.7	1134.0	13.0	1160.9	8.7	1.1
13PRUC_34	292	0.936	1.837	0.012	0.1804	0.0012	0.78543	1058.8	4.4	1069.3	6.4	1040.7	6.8	1069.3	6.4	1.0
13PRUC_35	64.3	1.697	2.444	0.030	0.2198	0.0019	0.83171	1256.2	9.1	1281.0	10.0	1215.0	13.0	1215.0	13.0	5.4
13PRUC_36	102	1.587	3.255	0.030	0.2599	0.0018	0.70381	1470.0	7.0	1489.4	9.0	1464.0	8.8	1464.0	8.8	1.7
13PRUC_37	87.5	1.118	2.260	0.021	0.2100	0.0016	0.78908	1199.6	6.4	1228.8	8.8	1162.0	14.0	1162.0	8.8	2.4
13PRUC_38	135	1.008	1.576	0.016	0.1641	0.0014	0.76196	961.4	6.3	980.7	7.7	926.0	11.0	980.7	7.7	2.0
13PRUC_39	227	1.18	1.770	0.022	0.1776	0.0018	0.81832	1034.9	8.0	1053.8	9.6	1010.0	13.0	1053.8	9.6	1.8
13PRUC_40	188.5	0.893	4.594	0.050	0.3055	0.0033	0.85491	1747.7	9.0	1718.0	16.0	1787.0	7.1	1787.0	7.1	3.9
13PRUC_41	61.2	0.8085	13.860	0.130	0.5453	0.0050	0.96631	2742.2	8.5	2805.0	21.0	2709.4	8.8	2709.4	8.8	3.5
13PRUC_42	74.5	1.009	1.998	0.029	0.1920	0.0017	0.918	1116.0	9.1	1132.2	9.3	1091.0	17.0	1132.2	9.3	1.5
13PRUC_43	204	1.663	4.824	0.026	0.3258	0.0020	0.75007	1789.0	4.6	1818.9	9.8	1756.4	5.8	1756.4	5.8	3.6
13PRUC_44	68.4	1.169	6.405	0.042	0.3806	0.0031	0.88057	2032.7	5.7	2079.0	14.0	2002.7	8.6	2002.7	8.6	3.8
13PRUC_45	349.7	1.503	2.276	0.015	0.2068	0.0017	0.40449	1204.7	4.6	1211.6	8.8	1191.9	7.6	1191.9	8.8	0.6
13PRUC_46	46.6	0.752	0.711	0.019	0.0896	0.0013	0.95995	544.0	11.0	553.1	7.5	530.0	32.0	553.1	7.5	1.7
13PRUC_48	17.92	1.412	1.977	0.043	0.1878	0.0033	0.93714	1106.0	15.0	1109.0	18.0	1120.0	33.0	1109.0	18.0	0.3
13PRUC_49	217	0.625	0.543	0.006	0.0712	0.0008	0.75118	440.5	4.1	443.4	4.6	430.0	15.0	443.4	4.6	0.7
13PRUC_50	229	13.51	1.713	0.016	0.1703	0.0015	0.78189	1013.1	5.8	1013.7	8.4	997.2	9.3	1013.7	8.4	0.1
13PRUC_51	7.48	0.69	2.397	0.080	0.2048	0.0062	0.98104	1240.0	25.0	1207.0	33.0	1320.0	33.0	1320.0	33.0	8.6
13PRUC_52	83.6	1.336	1.375	0.035	0.1293	0.0034	0.98389	876.0	15.0	783.0	19.0	1124.0	19.0	783.0	19.0	10.6
13PRUC_53	24.27	1.367	2.423	0.039	0.2174	0.0032	0.92313	1250.0	12.0	1268.0	17.0	1250.0	19.0	1250.0	19.0	1.4
13PRUC_54	130.6	2.08	4.815	0.043	0.3264	0.0026	0.87775	1791.7	7.5	1821.0	13.0	1736.1	9.0	1736.1	9.0	4.9
13PRUC_55	163	2.05	3.196	0.044	0.2523	0.0033	0.93573	1456.0	11.0	1450.0	17.0	1467.0	13.0	1467.0	13.0	1.2
13PRUC_56	68.8	0.116	1.024	0.017	0.1141	0.0012	0.84725	715.4	8.4	696.4	7.2	787.0	29.0	696.4	7.2	2.7
13PRUC_57	83.9	1.47	2.149	0.018	0.2010	0.0018	0.93446	1164.3	5.9	1180.4	9.6	1133.0	10.0	1180.4	9.6	1.4
13PRUC_58	144.5	2.278	4.769	0.034	0.3266	0.0027	0.89442	1779.1	6.0	1822.0	13.0	1746.0	10.0	1746.0	10.0	4.4
13PRUC_59	20.58	2.162	4.854	0.082	0.3265	0.0037	0.95384	1794.0	14.0	1824.0	19.0	1758.0	18.0	1758.0	18.0	3.8

13PRUC_60	93.6	1.033	5.424	0.051	0.3450	0.0030	0.88363	1888.0	8.1	1910.0	14.0	1870.1	6.7	1870.1	6.7	2.1
13PRUC_61	153.8	2.268	2.085	0.024	0.1952	0.0019	0.85211	1144.4	7.7	1149.0	10.0	1139.0	13.0	1149.0	10.0	0.4
13PRUC_62	46.57	0.942	4.650	0.044	0.3133	0.0029	0.88833	1758.8	7.8	1757.0	14.0	1756.0	11.0	1756.0	11.0	0.1
13PRUC_63	60.7	0.863	3.097	0.037	0.2464	0.0019	0.83434	1431.3	9.1	1420.0	9.9	1448.0	15.0	1448.0	15.0	1.9
13PRUC_64	62	0.839	5.178	0.070	0.3307	0.0033	0.84968	1848.0	11.0	1841.0	16.0	1861.0	12.0	1861.0	12.0	1.1
13PRUC_65	182	1.045	3.363	0.039	0.2630	0.0031	0.90891	1496.5	9.0	1505.0	16.0	1492.3	8.3	1492.3	8.3	0.9
13PRUC_66	284	1.66	0.518	0.015	0.0655	0.0019	0.97578	423.0	11.0	409.0	12.0	535.0	31.0	409.0	12.0	3.3
13PRUC_67	161.6	1.445	2.192	0.016	0.2039	0.0016	0.65917	1178.3	5.0	1196.3	8.7	1149.0	11.0	1196.3	8.7	1.5
13PRUC_68	134	1.177	2.590	0.029	0.2264	0.0020	0.83387	1297.4	8.1	1316.0	11.0	1269.0	11.0	1269.0	11.0	3.7
13PRUC_69	247	1.555	3.104	0.021	0.2556	0.0018	0.79213	1434.2	5.3	1467.4	9.1	1389.2	6.5	1389.2	6.5	5.6
13PRUC_70	83.4	1.8	1.821	0.024	0.1763	0.0021	0.83431	1054.3	8.8	1047.0	11.0	1063.0	12.0	1047.0	11.0	0.7
13PRUC_71	123.1	1.794	2.960	0.024	0.2438	0.0018	0.62887	1397.8	6.0	1406.2	9.4	1396.1	9.4	1396.1	9.4	0.7
13PRUC_72	156.8	0.609	2.239	0.019	0.2072	0.0017	0.75047	1192.9	6.1	1213.6	8.9	1164.0	10.0	1164.0	8.9	1.7
13PRUC_73	66.5	2.49	1.928	0.025	0.1849	0.0016	0.77051	1091.2	8.5	1093.8	8.8	1089.0	17.0	1093.8	8.8	0.2
13PRUC_74	250	1.71	14.190	0.100	0.5424	0.0059	0.89857	2762.4	6.9	2793.0	25.0	2742.2	8.7	2742.2	8.7	1.9
13PRUC_75	73.2	1.139	1.722	0.021	0.1713	0.0016	0.69867	1016.2	7.9	1019.2	8.9	1008.0	14.0	1019.2	8.9	0.3
13PRUC_76	96.8	0.839	0.856	0.013	0.1037	0.0010	0.77504	627.3	7.2	636.3	5.9	605.0	17.0	636.3	5.9	1.4
13PRUC_77	50.06	2.387	4.075	0.048	0.2936	0.0030	0.92411	1649.5	9.6	1659.0	15.0	1642.0	11.0	1642.0	11.0	1.0
13PRUC_78	49.5	0.79	0.824	0.015	0.0997	0.0013	0.86933	610.6	8.3	612.7	7.9	614.0	21.0	612.7	7.9	0.3
13PRUC_79	115.7	1.15	2.964	0.026	0.2473	0.0023	0.83746	1398.0	6.6	1426.0	12.0	1359.0	11.0	1359.0	11.0	4.9
13PRUC_80	32.2	0.5454	5.000	0.068	0.3175	0.0036	0.94407	1820.0	11.0	1777.0	18.0	1859.0	11.0	1859.0	11.0	4.4
13PRUC_81	28.43	0.692	2.455	0.035	0.2165	0.0025	0.8858	1258.0	10.0	1263.0	14.0	1265.0	18.0	1265.0	18.0	0.2
13PRUC_82	26.59	1.344	18.910	0.170	0.6066	0.0059	0.96746	3036.3	8.6	3055.0	24.0	3031.4	8.1	3031.4	8.1	0.8
13PRUC_83	127	0.301	2.620	0.058	0.2226	0.0027	0.93762	1300.0	13.0	1295.0	14.0	1338.0	17.0	1338.0	17.0	3.2
13PRUC_84	11.55	1.108	3.140	0.100	0.2411	0.0059	0.97109	1438.0	26.0	1391.0	31.0	1515.0	38.0	1515.0	38.0	8.2
13PRUC_85	232	2.4	0.552	0.007	0.0713	0.0006	0.57833	446.4	4.6	443.7	3.4	464.0	20.0	443.7	3.4	0.6
13PRUC_86	90.7	0.7618	0.873	0.018	0.1014	0.0010	0.82865	636.3	9.9	622.6	5.9	727.0	42.0	622.6	5.9	2.2
13PRUC_87	288	2.022	5.616	0.053	0.3533	0.0031	0.98653	1914.0	12.0	1950.0	15.0	1885.3	6.1	1885.3	6.1	3.4
13PRUC_88	102.6	1.705	2.761	0.031	0.2322	0.0025	0.89279	1345.6	8.2	1346.0	13.0	1352.0	12.0	1352.0	12.0	0.4
13PRUC_89	19.3	0.763	1.832	0.049	0.1778	0.0025	0.95659	1054.0	18.0	1055.0	14.0	1059.0	30.0	1055.0	14.0	0.1
13PRUC_90	229	1.89	1.918	0.022	0.1828	0.0014	0.71915	1086.9	7.6	1082.4	7.8	1109.0	12.0	1082.4	7.8	0.4
13PRUC_91	36.3	0.853	4.791	0.074	0.3219	0.0036	0.97893	1782.0	14.0	1799.0	17.0	1783.0	13.0	1783.0	13.0	0.9
13PRUC_92	201	6.02	7.013	0.058	0.3921	0.0034	0.88528	2112.6	7.3	2132.0	16.0	2098.3	7.0	2098.3	7.0	1.6
13PRUC_93	125.1	2.9	4.915	0.065	0.3242	0.0037	0.92906	1804.0	11.0	1810.0	18.0	1797.2	9.0	1797.2	9.0	0.7
13PRUC_94	160.5	0.6758	5.469	0.042	0.3438	0.0028	0.89154	1895.4	6.7	1905.0	13.0	1890.0	6.0	1890.0	6.0	0.8

13PRUC_95	1277	6.99	2.330	0.030	0.1979	0.0028	0.85934	1221.3	9.1	1164.0	15.0	1337.8	8.2	1164.0	15.0	4.7
13PRUC_95	739	3.66	3.011	0.020	0.2471	0.0018	0.50881	1410.3	5.0	1423.7	9.3	1402.8	9.9	1402.8	9.9	1.5
13PRUC_96	98.7	1.136	2.120	0.021	0.1959	0.0018	0.75666	1155.0	6.7	1153.0	9.8	1167.0	13.0	1153.0	9.8	0.2
13PRUC_97	37.5	0.6576	12.620	0.180	0.5066	0.0090	0.96413	2651.0	14.0	2641.0	38.0	2665.0	19.0	2665.0	19.0	0.9
13PRUC_98	166.4	1.337	3.914	0.030	0.2833	0.0021	0.75198	1617.0	6.1	1608.0	11.0	1647.4	6.6	1647.4	6.6	2.4
13PRUC_99	69.4	0.605	1.935	0.025	0.1882	0.0021	0.83265	1092.4	8.7	1111.0	12.0	1075.0	16.0	1111.0	12.0	1.7
13PRUC_100	214	3.35	6.017	0.056	0.3643	0.0031	0.89669	1977.7	8.1	2002.0	15.0	1969.5	7.4	1969.5	7.4	1.7
13PRUC_101	132	1.432	11.838	0.087	0.5116	0.0038	0.95663	2591.2	6.9	2663.0	16.0	2562.6	6.4	2562.6	6.4	3.9
13PRUC_102	108.4	1.625	22.830	0.270	0.6211	0.0075	0.98773	3219.0	12.0	3113.0	30.0	3299.5	7.9	3299.5	7.9	5.7
13PRUC_103	267	2.67	5.149	0.047	0.3308	0.0034	0.97482	1841.2	9.1	1842.0	17.0	1869.0	11.0	1869.0	11.0	1.4
13PRUC_104	82.3	1.576	1.912	0.026	0.1880	0.0020	0.84928	1084.6	9.0	1110.0	11.0	1068.0	14.0	1110.0	11.0	2.3
13PRUC_105	52.8	1.09	4.566	0.045	0.3144	0.0027	0.82875	1742.5	8.1	1762.0	13.0	1730.0	10.0	1730.0	10.0	1.8
13PRUC_106	17.1	1.74	1.960	0.110	0.1775	0.0091	0.98558	1097.0	37.0	1052.0	50.0	1217.0	41.0	1052.0	50.0	4.1
13PRUC_106	80.5	1.165	2.468	0.038	0.2237	0.0023	0.91366	1262.0	11.0	1301.0	12.0	1215.0	17.0	1215.0	17.0	7.1
13PRUC_107	65.7	0.955	14.260	0.150	0.5482	0.0058	0.98206	2766.0	10.0	2817.0	24.0	2747.7	6.3	2747.7	6.3	2.5
13PRUC_108	71.2	2.061	4.451	0.039	0.3070	0.0030	0.88059	1721.4	7.4	1725.0	15.0	1743.0	12.0	1743.0	12.0	1.0
13PRUC_109	376	3.133	12.602	0.077	0.5035	0.0032	0.87482	2650.1	5.7	2629.0	14.0	2681.9	4.5	2681.9	4.5	2.0
13PRUC_110	153.8	0.771	3.964	0.038	0.2845	0.0026	0.87851	1626.3	7.8	1614.0	13.0	1657.0	8.7	1657.0	8.7	2.6
13PRUC_111	91.2	0.978	0.465	0.009	0.0591	0.0008	0.88088	387.2	6.2	370.2	4.9	524.0	35.0	370.2	4.9	4.4
13PRUC_112	93	2.22	2.606	0.037	0.2185	0.0026	0.88789	1301.0	10.0	1274.0	14.0	1352.0	15.0	1352.0	15.0	5.8
13PRUC_113	33.2	0.4274	12.100	0.180	0.5140	0.0059	0.94172	2613.0	14.0	2673.0	25.0	2577.0	16.0	2577.0	16.0	3.7
13PRUC_114	104.9	0.978	2.781	0.039	0.2220	0.0022	0.86235	1350.0	10.0	1292.0	12.0	1440.0	17.0	1440.0	17.0	10.3
13PRUC_115	180	2.523	4.370	0.038	0.2967	0.0027	0.93551	1707.2	7.0	1675.0	13.0	1745.0	7.6	1745.0	7.6	4.0
13PRUC_116	156.1	1.317	2.093	0.015	0.1933	0.0013	0.66107	1146.2	4.9	1139.4	7.1	1168.0	11.0	1139.4	7.1	0.6
13PRUC_117	204	1.0347	0.685	0.012	0.0845	0.0009	0.72252	529.4	7.4	523.0	5.2	554.0	23.0	523.0	5.2	1.2
13PRUC_118	97	1.65	5.960	0.110	0.3590	0.0040	0.95387	1968.0	16.0	1977.0	19.0	1965.0	14.0	1965.0	14.0	0.6
13PRUC_119	67.2	0.896	2.082	0.037	0.1806	0.0027	0.95705	1143.0	12.0	1070.0	15.0	1276.0	30.0	1070.0	15.0	6.4
13PRUC_120	80	0.968	1.937	0.031	0.1860	0.0022	0.87082	1093.0	11.0	1099.0	12.0	1089.0	14.0	1099.0	12.0	0.5
11UPR01_1	140	0.83	0.540	0.015	0.0677	0.0009	0.33257	437.7	9.6	423.1	5.8	496.0	36.0	423.1	5.8	3.3
11UPR01_2	203.7	2.18	2.740	0.200	0.1810	0.0130	0.96135	1320.0	57.0	1063.0	72.0	1820.0	15.0	1063.0	72.0	19.5
11UPR01_3	123	1.599	4.216	0.040	0.2975	0.0028	0.85237	1676.5	7.8	1679.0	14.0	1667.0	10.0	1667.0	10.0	0.7
11UPR01_4	95.7	1.497	2.291	0.034	0.2023	0.0026	0.39477	1210.0	10.0	1187.0	14.0	1247.0	13.0	1187.0	14.0	1.9
11UPR01_5	541	1.387	0.092	0.002	0.0138	0.0003	0.62432	89.2	2.0	88.1	1.6	156.0	24.0	88.1	1.6	1.2

11UPR01_6	176.8	1.379	4.115	0.027	0.2950	0.0018	0.50322	1657.7	5.4	1666.4	8.8	1646.7	6.5	1646.7	6.5	1.2
11UPR01_7	144	0.813	1.620	0.120	0.1280	0.0110	0.85146	955.0	47.0	768.0	64.0	1496.0	44.0	768.0	64.0	19.6
11UPR01_8	105.1	0.83	3.991	0.029	0.2872	0.0019	0.60077	1632.0	5.9	1627.3	9.7	1641.8	6.5	1641.8	6.5	0.9
11UPR01_9	222	3.186	4.363	0.036	0.2971	0.0027	0.66432	1705.1	6.8	1677.0	13.0	1720.8	9.0	1720.8	9.0	2.5
11UPR01_10	61.3	0.965	4.150	0.057	0.2918	0.0050	0.54516	1663.0	11.0	1654.0	24.0	1674.0	14.0	1674.0	14.0	1.2
11UPR01_11	101.6	0.7938	3.328	0.030	0.2595	0.0024	0.63058	1487.4	7.1	1487.0	12.0	1488.5	8.8	1488.5	8.8	0.1
11UPR01_12	137.6	0.998	3.078	0.046	0.2411	0.0032	0.74904	1426.0	11.0	1392.0	17.0	1474.0	11.0	1474.0	11.0	5.6
11UPR01_13	80.8	1.143	3.105	0.035	0.2419	0.0024	0.42296	1433.3	8.6	1397.0	12.0	1483.0	13.0	1483.0	13.0	5.8
11UPR01_14	332	1.001	0.565	0.007	0.0718	0.0008	0.66772	454.4	4.8	447.0	5.0	480.0	16.0	447.0	5.0	1.6
11UPR01_15	38.8	0.609	7.540	0.090	0.3923	0.0049	0.73468	2177.0	11.0	2133.0	23.0	2199.0	11.0	2199.0	11.0	3.0
11UPR01_16	144.7	1.515	2.396	0.023	0.2110	0.0026	0.54321	1241.9	6.7	1234.0	14.0	1258.0	14.0	1258.0	14.0	1.9
11UPR01_17	166	1.468	0.385	0.006	0.0525	0.0006	0.16259	330.4	4.5	330.1	3.5	324.0	22.0	330.1	3.5	0.1
11UPR01_18	132.3	1.98	2.874	0.040	0.2346	0.0034	0.56016	1374.0	11.0	1361.0	17.0	1400.0	17.0	1400.0	17.0	2.8
11UPR01_19	311	1.66	0.149	0.009	0.0151	0.0003	0.50498	140.3	7.7	96.5	2.0	1021.0	99.0	DISC	DISC	31.2
11UPR01_20	241	3.67	1.124	0.016	0.1226	0.0017	0.54708	764.8	7.7	745.6	9.9	822.0	17.0	745.6	9.9	2.5
11UPR01_21	54.3	0.565	3.325	0.037	0.2539	0.0025	0.32668	1487.4	8.9	1458.0	13.0	1528.0	14.0	1528.0	14.0	4.6
11UPR01_22	309	1.43	2.978	0.040	0.2426	0.0027	0.92293	1398.0	12.0	1400.0	14.0	1399.0	15.0	1399.0	15.0	0.1
11UPR01_23	2.12	0.0106	1.500	0.140	0.0912	0.0059	0.21138	928.0	54.0	561.0	35.0	2020.0	120.0	DISC	DISC	39.5
11UPR01_24	61.2	1.463	2.999	0.039	0.2367	0.0026	0.47498	1408.9	9.7	1369.0	14.0	1475.0	15.0	1475.0	15.0	7.2
11UPR01_25	42.1	2.298	1.896	0.033	0.1728	0.0027	0.34131	1079.0	12.0	1029.0	15.0	1177.0	20.0	1029.0	15.0	4.6
11UPR01_26	82.5	1.164	3.324	0.038	0.2576	0.0024	0.76432	1485.9	9.0	1477.0	12.0	1509.0	11.0	1509.0	11.0	2.1
11UPR01_27	69.5	1.018	1.988	0.038	0.1829	0.0034	0.74937	1111.0	13.0	1083.0	18.0	1161.0	12.0	1083.0	18.0	2.5
11UPR01_28	278.5	1.52	0.497	0.006	0.0652	0.0006	0.35125	409.5	4.3	407.3	3.4	427.0	18.0	407.3	3.4	0.5
11UPR01_29	363	1.993	2.500	0.110	0.1817	0.0076	0.9823	1261.0	34.0	1074.0	42.0	1602.2	8.9	1074.0	42.0	14.8
11UPR01_30	118.5	1.884	2.081	0.020	0.1925	0.0019	0.49269	1142.0	6.5	1135.0	10.0	1158.0	9.9	1135.0	10.0	0.6
11UPR01_31	268.6	1.465	1.732	0.010	0.1700	0.0011	0.32622	1020.4	3.7	1012.2	5.9	1033.7	8.2	1012.2	5.9	0.8
11UPR01_32	194	1.88	2.345	0.023	0.2074	0.0019	0.9213	1225.7	7.1	1215.0	10.0	1247.5	7.2	1247.5	7.2	2.6
11UPR01_33	91	1.443	1.740	0.019	0.1711	0.0015	0.35801	1023.0	7.0	1018.0	8.5	1042.0	12.0	1018.0	8.5	0.5
11UPR01_34	56.6	1.573	2.128	0.035	0.1923	0.0027	0.86495	1157.0	11.0	1133.0	14.0	1199.0	13.0	1133.0	14.0	2.1
11UPR01_35	54.1	0.92	1.773	0.029	0.1756	0.0021	0.78988	1034.0	11.0	1043.0	12.0	1033.0	12.0	1043.0	12.0	0.9
11UPR01_36	75.5	1.406	13.140	0.230	0.4988	0.0093	0.96001	2687.0	18.0	2606.0	41.0	2738.9	7.4	2738.9	7.4	4.9
11UPR01_37	194	1.884	3.700	0.100	0.2298	0.0061	0.9548	1569.0	22.0	1332.0	32.0	1911.3	8.5	DISC	DISC	30.3
11UPR01_38	126.8	0.705	0.706	0.015	0.0867	0.0012	0.052314	539.6	7.9	535.9	7.0	573.0	35.0	535.9	7.0	0.7
11UPR01_39	217.9	1.313	4.319	0.035	0.2919	0.0030	0.77162	1696.6	6.8	1653.0	15.0	1745.1	6.8	1745.1	6.8	5.3
11UPR01_40	261.7	0.696	0.587	0.013	0.0686	0.0014	0.48879	468.8	8.3	429.5	8.0	691.0	29.0	429.5	8.0	8.4

11UPR01_41	455	1.92	2.644	0.049	0.1939	0.0028	0.84025	1311.0	14.0	1142.0	15.0	1614.0	18.0	1142.0	15.0	12.9
11UPR01_42	453	0.59	1.450	0.018	0.1492	0.0017	0.72729	911.8	7.5	896.4	9.3	936.0	13.0	896.4	9.3	1.7
11UPR01_43	149.7	1.247	0.166	0.004	0.0248	0.0003	0.15765	156.0	3.8	158.2	2.2	181.0	27.0	158.2	2.2	1.4
11UPR01_44	219.2	2.27	4.771	0.042	0.3178	0.0028	0.8099	1779.4	7.3	1778.0	14.0	1781.4	5.1	1781.4	5.1	0.2
11UPR01_45	185	0.993	3.475	0.047	0.2548	0.0043	0.40852	1520.0	11.0	1466.0	21.0	1600.0	40.0	1600.0	40.0	8.4
11UPR01_46	69.7	0.5908	0.837	0.012	0.1001	0.0011	0.27073	617.1	6.6	615.1	6.3	643.0	22.0	615.1	6.3	0.3
11UPR01_47	92	1.446	3.342	0.046	0.2492	0.0025	0.62523	1490.0	11.0	1434.0	13.0	1573.0	10.0	1573.0	10.0	8.8
11UPR01_48	102	1.042	2.271	0.041	0.2027	0.0027	0.88805	1202.0	13.0	1190.0	14.0	1230.0	11.0	1190.0	14.0	1.0
11UPR01_49	490	7.37	0.531	0.006	0.0691	0.0006	0.45782	432.5	3.8	430.7	3.8	440.0	14.0	430.7	3.8	0.4
11UPR01_50	72.1	0.503	4.927	0.072	0.3134	0.0041	0.88481	1807.0	12.0	1757.0	20.0	1860.9	7.6	1860.9	7.6	5.6
11UPR01_51	93.9	1.008	3.994	0.034	0.2830	0.0032	0.62294	1632.7	6.9	1606.0	16.0	1681.0	10.0	1681.0	10.0	4.5
11UPR01_52	262	0.82	0.835	0.016	0.1006	0.0017	0.98146	615.7	9.4	618.0	10.0	615.0	10.0	618.0	10.0	0.4
11UPR01_53	111	0.86	1.890	0.160	0.1560	0.0120	0.97688	1049.0	54.0	929.0	68.0	1361.0	16.0	929.0	68.0	11.4
11UPR01_54	78.6	1.315	2.343	0.027	0.2069	0.0017	0.53856	1225.8	8.0	1212.2	9.3	1254.3	9.9	1254.3	9.9	3.4
11UPR01_55	127	1.36	3.902	0.046	0.2801	0.0030	0.81356	1613.2	9.6	1592.0	15.0	1636.0	11.0	1636.0	11.0	2.7
11UPR01_56	145	0.961	1.932	0.023	0.1827	0.0022	0.46475	1092.4	8.1	1081.0	12.0	1098.0	14.0	1081.0	12.0	1.0
11UPR01_57	122	1.796	2.404	0.025	0.2088	0.0021	0.55376	1243.3	7.5	1222.0	11.0	1277.0	11.0	1277.0	11.0	4.3
11UPR01_58	490	4.45	3.811	0.038	0.2581	0.0026	0.84097	1594.5	8.0	1480.0	13.0	1755.4	4.8	1755.4	4.8	15.7
11UPR01_59	91.6	0.873	8.260	0.110	0.3549	0.0042	0.83293	2259.0	12.0	1964.0	20.0	2538.6	8.8	2538.6	8.8	22.6
11UPR01_60	66.2	1.303	7.715	0.092	0.3918	0.0044	0.81491	2197.0	11.0	2131.0	20.0	2260.9	8.2	2260.9	8.2	5.7
11UPR01_61	391	8.7	0.431	0.017	0.0570	0.0022	0.97572	363.0	12.0	357.0	13.0	427.0	17.0	357.0	13.0	1.7
11UPR01_62	52.8	1.348	1.934	0.022	0.1752	0.0016	0.47706	1094.3	7.8	1040.7	9.0	1197.0	13.0	1040.7	9.0	4.9
11UPR01_63	322.5	2.37	3.110	0.100	0.2192	0.0059	0.98754	1434.0	27.0	1281.0	32.0	1674.0	14.0	1674.0	14.0	23.5
11UPR01_64	315	0.91	0.790	0.009	0.0937	0.0010	0.55045	591.2	5.1	577.6	6.1	639.0	13.0	577.6	6.1	2.3
11UPR01_65	96.1	0.684	0.530	0.011	0.0689	0.0008	0.33117	431.4	7.6	429.5	4.7	463.0	28.0	429.5	4.7	0.4
11UPR01_66	510	1.79	0.094	0.002	0.0142	0.0002	0.5523	90.7	1.6	90.8	1.4	138.0	17.0	90.8	1.4	0.1
11UPR01_67	258	1.22	0.423	0.008	0.0564	0.0008	0.93097	357.8	5.9	353.6	5.0	404.0	16.0	353.6	5.0	1.2
11UPR01_68	125.5	0.582	0.532	0.011	0.0683	0.0013	0.68102	432.4	7.5	425.8	7.7	485.0	20.0	425.8	7.7	1.5
11UPR01_69	261	1.77	2.385	0.030	0.2062	0.0024	0.88573	1235.0	10.0	1208.0	13.0	1290.0	13.0	1290.0	13.0	6.4
11UPR01_70	59.2	1.16	1.774	0.026	0.1687	0.0020	0.21566	1035.1	9.7	1005.0	11.0	1103.0	20.0	1005.0	11.0	2.9
11UPR01_71	50.1	2.414	5.229	0.062	0.3243	0.0038	0.62741	1856.0	10.0	1810.0	18.0	1908.9	8.8	1908.9	8.8	5.2
11UPR01_72	56.5	1.948	2.190	0.025	0.2053	0.0024	0.29544	1177.4	7.8	1204.0	13.0	1132.0	16.0	1132.0	13.0	2.3
11UPR01_73	78.3	1.608	1.759	0.020	0.1709	0.0013	0.48415	1029.8	7.2	1018.1	6.9	1054.0	13.0	1018.1	6.9	1.1
11UPR01_74	410	3.1	1.828	0.026	0.1755	0.0037	0.98652	1048.0	16.0	1042.0	21.0	1074.0	11.0	1042.0	21.0	0.6
11UPR01_75	94.5	1.146	1.805	0.076	0.1662	0.0024	0.64552	1046.0	27.0	992.0	13.0	1196.0	60.0	992.0	13.0	5.2

11UPR01_76	67.1	1.078	0.537	0.011	0.0690	0.0008	0.12952	436.0	7.5	429.9	4.8	484.0	26.0	429.9	4.8	1.4
11UPR01_77	170	4.02	5.875	0.053	0.3561	0.0027	0.76063	1956.9	7.9	1963.0	13.0	1947.1	6.7	1947.1	6.7	0.8
11UPR01_78	201.5	11.15	2.125	0.016	0.1971	0.0017	0.50982	1156.6	5.2	1159.7	8.9	1149.1	9.2	1159.7	8.9	0.3
11UPR01_79	151.4	7.4	2.620	0.310	0.2000	0.0190	0.99473	1210.0	100.0	1160.0	110.0	1349.0	88.0	1160.0	110.0	4.1
11UPR01_80	218.9	0.688	4.001	0.034	0.2908	0.0024	0.75559	1634.8	6.7	1645.0	12.0	1620.8	7.0	1620.8	7.0	1.5
11UPR01_81	139.1	1.416	4.376	0.056	0.2942	0.0036	0.86609	1707.0	11.0	1662.0	18.0	1768.8	7.3	1768.8	7.3	6.0
11UPR01_82	324	1.944	0.544	0.089	0.0482	0.0063	0.99226	415.0	57.0	301.0	38.0	1157.0	82.0	301.0	38.0	27.5
11UPR01_83	310	2.45	1.718	0.047	0.1594	0.0035	0.93481	1012.0	18.0	953.0	19.0	1141.0	13.0	953.0	19.0	5.8
11UPR01_84	177	1.871	4.797	0.086	0.3070	0.0049	0.87101	1782.0	15.0	1725.0	24.0	1847.2	9.9	1847.2	9.9	6.6
11UPR01_85	126.3	4.01	3.803	0.031	0.2733	0.0026	0.58621	1593.0	6.6	1557.0	13.0	1649.5	9.3	1649.5	9.3	5.6
11UPR01_86	119.1	1.749	2.467	0.029	0.2109	0.0021	0.5101	1261.8	8.4	1234.0	11.0	1313.0	11.0	1313.0	11.0	6.0
11UPR01_87	45	2.36	12.610	0.190	0.4906	0.0065	0.76949	2651.0	14.0	2572.0	28.0	2710.0	10.0	2710.0	10.0	5.1
11UPR01_88	347	2.147	4.704	0.036	0.3160	0.0033	0.85357	1767.6	6.5	1770.0	16.0	1764.5	6.3	1764.5	6.3	0.3
11UPR01_89	187	1.139	13.510	0.140	0.5225	0.0045	0.77418	2715.2	9.8	2709.0	19.0	2734.6	8.1	2734.6	8.1	0.9
11UPR01_90	90.3	0.375	1.563	0.021	0.1597	0.0017	0.71055	955.1	8.2	955.0	9.5	963.0	12.0	955.0	9.5	0.0
11UPR01_91	39.1	1.809	2.024	0.028	0.1875	0.0019	0.26245	1123.9	9.2	1108.0	10.0	1179.0	16.0	1108.0	10.0	1.4
11UPR01_92	109	0.993	0.819	0.011	0.0982	0.0010	0.20276	607.3	6.0	603.9	6.1	607.0	18.0	603.9	6.1	0.6
11UPR01_93	66.4	0.581	4.177	0.043	0.2971	0.0028	0.65523	1668.9	8.5	1677.0	14.0	1665.0	11.0	1665.0	11.0	0.7
11UPR01_94	71.7	0.813	3.146	0.035	0.2524	0.0027	0.70092	1443.2	8.5	1451.0	14.0	1442.0	13.0	1442.0	13.0	0.6
11UPR01_95	191.1	1.233	3.208	0.023	0.2515	0.0016	0.66746	1458.7	5.5	1446.1	8.4	1473.4	7.9	1473.4	7.9	1.9
11UPR01_96	276	4.44	1.711	0.014	0.1705	0.0012	0.42486	1012.4	5.3	1014.5	6.5	1010.2	9.7	1014.5	6.5	0.2
11UPR01_97	181.6	0.864	0.720	0.011	0.0887	0.0011	0.41142	550.5	6.4	548.0	6.3	575.0	14.0	548.0	6.3	0.5
11UPR01_98	228	1.592	3.343	0.043	0.2577	0.0030	0.97706	1490.0	10.0	1478.0	15.0	1513.8	5.9	1513.8	5.9	2.4
11UPR01_99	80.8	0.7884	1.625	0.031	0.1663	0.0026	0.73413	979.0	12.0	991.0	15.0	953.0	18.0	991.0	15.0	1.2
11UPR01_100	126.5	0.926	4.103	0.036	0.2944	0.0025	0.4671	1654.6	7.1	1663.0	12.0	1654.0	10.0	1654.0	10.0	0.5
11UPR01_101	69.4	2.006	1.747	0.021	0.1665	0.0016	0.29802	1026.5	7.7	992.5	8.7	1105.0	13.0	992.5	8.7	3.3
11UPR01_102	211.2	1.554	0.400	0.005	0.0532	0.0005	0.18828	341.4	3.7	334.2	3.3	388.0	22.0	334.2	3.3	2.1
11UPR01_103	80.4	1.097	2.480	0.036	0.2162	0.0022	0.73992	1265.0	10.0	1262.0	12.0	1274.0	14.0	1274.0	14.0	0.9
11UPR01_104	34.7	1.027	2.457	0.043	0.2163	0.0028	0.51467	1259.0	13.0	1262.0	15.0	1251.0	19.0	1251.0	19.0	0.9
11UPR01_105	1400	64	4.210	0.680	0.2350	0.0310	0.97068	1480.0	150.0	1320.0	160.0	1961.0	64.0	DISC	DISC	32.7
11UPR01_106	80.4	2.155	3.905	0.042	0.2775	0.0027	0.56665	1615.1	8.9	1578.0	14.0	1656.0	11.0	1656.0	11.0	4.7
11UPR01_107	387	1.97	0.267	0.003	0.0380	0.0004	0.46691	240.3	2.6	240.2	2.6	259.0	13.0	240.2	2.6	0.0
11UPR01_108	111.9	0.987	2.170	0.022	0.2007	0.0015	0.40671	1170.9	7.1	1178.8	8.0	1155.0	14.0	1178.8	8.0	0.7
11UPR01_109	83.2	1.005	5.692	0.051	0.3524	0.0030	0.52356	1929.6	7.7	1946.0	14.0	1914.2	9.3	1914.2	9.3	1.7
11UPR01_110	930	1.93	2.120	0.180	0.1680	0.0170	0.9851	1131.0	68.0	985.0	99.0	1398.0	37.0	985.0	99.0	12.9

11UPR01_111	46.2	2.22	4.381	0.051	0.3014	0.0030	0.52988	1707.8	9.7	1700.0	15.0	1723.0	13.0	1723.0	13.0	1.3
11UPR01_112	171.8	2.03	1.857	0.049	0.1772	0.0030	0.8452	1067.0	18.0	1051.0	17.0	1124.0	27.0	1051.0	17.0	1.5
11UPR01_113	333	1.004	0.094	0.002	0.0136	0.0003	0.70674	90.9	2.2	87.1	1.6	219.0	29.0	87.1	1.6	4.2
11UPR01_114	486	1.03	0.577	0.010	0.0702	0.0013	0.9747	462.3	6.8	437.0	8.1	596.0	14.0	437.0	8.1	5.5
11UPR01_115	107	0.72	0.718	0.014	0.0896	0.0014	0.25045	549.7	8.2	552.8	8.4	559.0	30.0	552.8	8.4	0.6
11UPR01_116	71.4	0.706	3.771	0.042	0.2782	0.0026	0.60397	1586.9	9.2	1582.0	13.0	1584.0	11.0	1584.0	11.0	0.1
11UPR01_117	77.8	0.64	0.554	0.009	0.0723	0.0008	0.039084	446.9	5.8	449.9	5.0	446.0	22.0	449.9	5.0	0.7
11UPR01_118	169.3	2.31	5.830	0.110	0.3468	0.0053	0.98391	1948.0	18.0	1918.0	26.0	1982.0	12.0	1982.0	12.0	3.2
11UPR01_119	172	1.09	3.233	0.029	0.2531	0.0026	0.73725	1465.6	7.2	1454.0	13.0	1491.1	7.6	1491.1	7.6	2.5
11UPR01_120	284	1.97	1.130	0.015	0.1249	0.0016	0.87469	768.3	7.3	758.4	9.0	800.0	13.0	758.4	9.0	1.3
11UPR01_121	41.9	0.805	0.678	0.017	0.0856	0.0014	0.14074	526.0	10.0	529.5	8.1	533.0	34.0	529.5	8.1	0.7
11UPR02_1	32.6	1.123	2.809	0.030	0.2328	0.0025	0.10436	1358.4	8.3	1349.0	13.0	1363.0	17.0	1363.0	17.0	1.0
11UPR02_2	188.8	1.174	4.816	0.035	0.3188	0.0021	0.77709	1787.2	6.1	1784.0	10.0	1782.6	5.2	1782.6	5.2	0.1
11UPR02_3	154.3	0.719	3.786	0.054	0.2753	0.0036	0.94239	1586.0	13.0	1567.0	18.0	1611.0	11.0	1611.0	11.0	2.7
11UPR02_4	163	3.87	8.720	0.700	0.4040	0.0160	0.95809	2261.0	76.0	2180.0	75.0	2325.0	77.0	2325.0	77.0	6.2
11UPR02_5	71.6	0.568	3.340	0.047	0.2472	0.0022	0.45915	1489.0	11.0	1425.0	11.0	1573.0	20.0	1573.0	20.0	9.4
11UPR02_6	33.1	0.744	3.323	0.042	0.2565	0.0027	0.39542	1487.0	10.0	1472.0	14.0	1511.0	14.0	1511.0	14.0	2.6
11UPR02_7	195	2.61	4.457	0.033	0.3049	0.0023	0.7377	1722.6	6.1	1716.0	12.0	1725.9	6.4	1725.9	6.4	0.6
11UPR02_8	163.6	0.849	0.529	0.008	0.0690	0.0007	0.53129	430.7	5.2	430.2	4.2	422.0	14.0	430.2	4.2	0.1
11UPR02_9	208.2	1.902	2.282	0.017	0.2037	0.0016	0.47648	1206.4	5.1	1195.3	8.8	1228.5	8.2	1195.3	8.8	0.9
11UPR02_10	612	1.85	4.940	0.140	0.3051	0.0077	0.98061	1808.0	23.0	1720.0	37.0	1916.0	9.5	1916.0	9.5	10.2
11UPR02_11	89.1	1.142	1.505	0.019	0.1510	0.0017	0.36809	932.0	7.7	906.4	9.3	1003.0	16.0	906.4	9.3	2.7
11UPR02_12	145	1.305	1.609	0.043	0.1538	0.0040	0.91157	971.0	17.0	922.0	22.0	1090.0	12.0	922.0	22.0	5.0
11UPR02_13	229	1.121	2.989	0.034	0.2382	0.0025	0.61664	1405.2	8.8	1377.0	13.0	1438.0	12.0	1438.0	12.0	4.2
11UPR02_14	191	1.215	2.567	0.033	0.2158	0.0028	0.78198	1290.8	9.5	1259.0	15.0	1340.8	9.9	1340.8	9.9	6.1
11UPR02_15	371	1.65	1.920	0.035	0.1803	0.0025	0.87077	1087.0	12.0	1068.0	14.0	1102.0	13.0	1068.0	14.0	1.7
11UPR02_16	122.4	1.6	3.520	0.140	0.2381	0.0024	0.12002	1533.0	32.0	1377.0	13.0	1786.0	78.0	1786.0	78.0	22.9
11UPR02_17	69.3	1.677	3.207	0.051	0.2396	0.0047	0.53279	1457.0	12.0	1387.0	25.0	1545.0	24.0	1545.0	24.0	10.2
11UPR02_18	226	0.706	0.510	0.006	0.0654	0.0007	0.35483	418.7	4.1	408.3	4.1	471.0	13.0	408.3	4.1	2.5
11UPR02_19	106.5	1.92	1.910	0.018	0.1760	0.0017	0.27503	1084.9	6.4	1044.9	9.3	1149.0	12.0	1044.9	9.3	3.7
11UPR02_20	209	1.725	2.139	0.039	0.1756	0.0034	0.92939	1160.0	13.0	1042.0	19.0	1388.0	18.0	1042.0	19.0	10.2
11UPR02_21	143.1	1.716	2.640	0.024	0.2226	0.0017	0.37583	1311.5	6.6	1295.5	9.2	1341.5	9.8	1341.5	9.8	3.4
11UPR02_22	30.3	0.663	0.747	0.024	0.0918	0.0022	0.36718	566.0	14.0	566.0	13.0	613.0	40.0	566.0	13.0	0.0

11UPR02_23	319	1.525	0.491	0.007	0.0600	0.0013	0.23412	405.6	4.5	375.7	8.0	561.0	56.0	375.7	8.0	7.4
11UPR02_24	156	0.734	3.779	0.050	0.2772	0.0047	0.72661	1589.0	10.0	1577.0	24.0	1618.0	14.0	1618.0	14.0	2.5
11UPR02_25	79	0.704	4.040	0.730	0.2641	0.0063	0.99503	1551.0	43.0	1510.0	31.0	1591.0	51.0	1591.0	51.0	5.1
11UPR02_26	82.2	2.438	1.588	0.031	0.1552	0.0030	0.74994	964.0	12.0	930.0	17.0	1052.0	21.0	930.0	17.0	3.5
11UPR02_27	72.9	1.619	1.730	0.022	0.1720	0.0018	0.48698	1018.9	8.2	1023.1	9.9	1025.0	14.0	1023.1	9.9	0.4
11UPR02_28	134.5	1.12	2.501	0.034	0.2002	0.0030	0.26004	1275.1	9.6	1176.0	16.0	1449.0	13.0	1176.0	16.0	7.8
11UPR02_29	211	2.338	4.396	0.035	0.2965	0.0027	0.68339	1712.7	6.4	1673.0	13.0	1761.1	8.9	1761.1	8.9	5.0
11UPR02_30	342	0.615	3.555	0.036	0.2570	0.0027	0.79897	1539.1	8.0	1474.0	14.0	1628.8	8.7	1628.8	8.7	9.5
11UPR02_31	294	2.23	4.181	0.038	0.2831	0.0029	0.80232	1669.8	7.6	1607.0	15.0	1745.9	6.7	1745.9	6.7	8.0
11UPR02_32	142	1.702	2.639	0.030	0.2209	0.0020	0.619	1311.0	8.3	1287.0	11.0	1353.0	11.0	1353.0	11.0	4.9
11UPR02_33	56.6	2.225	1.532	0.027	0.1518	0.0021	0.66266	942.0	11.0	912.0	12.0	1021.0	14.0	912.0	12.0	3.2
11UPR02_34	107	1.155	3.490	0.053	0.2458	0.0042	0.58858	1524.0	12.0	1416.0	22.0	1662.0	17.0	1662.0	17.0	14.8
11UPR02_35	114	1.448	3.033	0.033	0.2338	0.0021	0.57012	1416.3	8.1	1354.0	11.0	1506.0	11.0	1506.0	11.0	10.1
11UPR02_36	22.5	0.674	1.514	0.039	0.1374	0.0028	0.2312	936.0	15.0	830.0	16.0	1213.0	42.0	830.0	16.0	11.3
11UPR02_37	127.6	0.841	1.878	0.025	0.1728	0.0019	0.60432	1072.8	8.9	1027.0	10.0	1177.0	16.0	1027.0	10.0	4.3
11UPR02_38	191	0.549	4.025	0.083	0.2910	0.0064	0.88057	1640.0	16.0	1645.0	32.0	1638.0	13.0	1638.0	13.0	0.4
11UPR02_39	30.7	0.759	1.415	0.043	0.1382	0.0051	0.51975	893.0	18.0	834.0	29.0	1084.0	38.0	834.0	29.0	6.6
11UPR02_40	332	1.261	1.469	0.043	0.1139	0.0037	0.94067	916.0	18.0	695.0	21.0	1511.0	15.0	695.0	21.0	24.1
11UPR02_41	305	0.893	4.630	0.057	0.3021	0.0047	0.75469	1754.0	10.0	1701.0	23.0	1790.0	19.0	1790.0	19.0	5.0
11UPR02_42	60.4	0.857	3.355	0.057	0.2515	0.0030	0.68467	1495.0	13.0	1446.0	16.0	1543.0	19.0	1543.0	19.0	6.3
11UPR02_43	326	1.211	0.531	0.009	0.0684	0.0011	0.66016	432.2	5.7	426.7	6.4	478.0	21.0	426.7	6.4	1.3
11UPR02_44	164.8	12.8	0.642	0.009	0.0787	0.0008	0.39967	504.1	5.6	488.4	4.9	568.0	19.0	488.4	4.9	3.1
11UPR02_45	289	1.144	0.652	0.011	0.0639	0.0008	0.29008	509.2	7.0	399.2	4.8	1056.0	26.0	399.2	4.8	21.6
11UPR02_46	159.8	5.9	12.560	0.130	0.4863	0.0058	0.74199	2646.3	9.6	2554.0	25.0	2735.7	7.0	2735.7	7.0	6.6
11UPR02_47	42.6	2.89	0.482	0.018	0.0592	0.0016	0.29716	402.0	12.0	370.6	9.7	564.0	40.0	370.6	9.7	7.8
11UPR02_48	205	1.538	3.420	0.057	0.2518	0.0045	0.86431	1510.0	14.0	1447.0	23.0	1601.0	13.0	1601.0	13.0	9.6
11UPR02_49	50.9	1.398	5.841	0.071	0.3264	0.0036	0.57617	1952.0	11.0	1820.0	17.0	2109.0	10.0	2109.0	10.0	13.7
11UPR02_50	297	2.077	14.000	0.250	0.4921	0.0091	0.92099	2748.0	17.0	2579.0	39.0	2884.0	7.7	2884.0	7.7	10.6
11UPR02_51	121.1	0.393	0.702	0.013	0.0889	0.0019	0.62527	539.2	7.8	549.0	11.0	541.0	24.0	549.0	11.0	1.8
11UPR02_52	32.8	1.059	3.974	0.060	0.2867	0.0042	0.36738	1628.0	12.0	1625.0	21.0	1652.0	16.0	1652.0	16.0	1.6
11UPR02_53	845	5.84	3.650	0.160	0.2419	0.0093	0.90128	1556.0	35.0	1399.0	48.0	1785.0	28.0	1785.0	28.0	21.6
11UPR02_54	1110	0.854	0.079	0.005	0.0116	0.0006	0.9018	76.5	4.2	74.6	4.0	156.0	21.0	74.6	4.0	2.5
11UPR02_55	117	2.03	0.797	0.018	0.0971	0.0019	0.56033	594.0	10.0	597.0	11.0	584.0	29.0	597.0	11.0	0.5
11UPR02_56	276.7	1.158	2.639	0.075	0.1964	0.0062	0.87265	1313.0	20.0	1161.0	32.0	1603.0	22.0	1161.0	32.0	11.6
11UPR02_57	46.4	0.609	1.751	0.027	0.1676	0.0025	0.1907	1026.4	9.8	1001.0	14.0	1067.0	25.0	1001.0	14.0	2.5

11UPR02_58	105	1.238	1.640	0.020	0.1589	0.0017	0.38639	985.0	7.5	950.4	9.5	1060.0	14.0	950.4	9.5	3.5
11UPR02_59	169	2.538	1.728	0.016	0.1738	0.0020	0.40934	1019.5	6.0	1033.0	11.0	1003.0	14.0	1033.0	11.0	1.3
11UPR02_60	73.9	0.8708	9.980	0.120	0.4522	0.0044	0.77425	2435.0	11.0	2404.0	19.0	2460.4	9.0	2460.4	9.0	2.3
11UPR02_61	101.7	1.458	2.573	0.037	0.2161	0.0032	0.67791	1292.0	11.0	1261.0	17.0	1343.0	16.0	1343.0	16.0	6.1
11UPR02_62	137.5	7.68	1.616	0.015	0.1607	0.0014	0.39104	975.9	5.9	960.5	7.8	1010.8	9.5	960.5	7.8	1.6
11UPR02_63	131.3	1.256	1.679	0.014	0.1666	0.0015	0.35385	1000.5	5.3	993.4	8.2	1020.0	12.0	993.4	8.2	0.7
11UPR02_64	263.8	3.17	4.306	0.030	0.2945	0.0027	0.74151	1694.3	5.8	1664.0	13.0	1739.8	8.3	1739.8	8.3	4.4
11UPR02_65	299	11.1	1.731	0.068	0.1677	0.0048	0.92974	1024.0	24.0	998.0	27.0	1076.0	25.0	998.0	27.0	2.5
11UPR02_66	47	0.549	9.095	0.071	0.4098	0.0038	0.60842	2347.2	7.2	2214.0	18.0	2467.5	8.0	2467.5	8.0	10.3
11UPR02_67	138.7	1.589	0.388	0.007	0.0529	0.0006	0.29725	332.3	4.8	332.1	3.7	361.0	26.0	332.1	3.7	0.1
11UPR02_68	178.8	0.9679	0.512	0.007	0.0666	0.0006	0.33539	419.7	4.8	415.3	3.7	456.0	18.0	415.3	3.7	1.0
11UPR02_69	321	2.04	4.977	0.078	0.3135	0.0040	0.9487	1811.0	15.0	1757.0	20.0	1882.0	11.0	1882.0	11.0	6.6
11UPR02_70	118	0.983	3.285	0.034	0.2626	0.0024	0.4824	1478.5	8.3	1503.0	12.0	1437.0	12.0	1437.0	12.0	4.6
11UPR02_71	651	2.164	2.347	0.033	0.1797	0.0028	0.87541	1226.0	10.0	1065.0	15.0	1522.0	11.0	1065.0	15.0	13.1
11UPR02_72	30.4	1.14	3.455	0.058	0.2441	0.0037	0.37541	1517.0	13.0	1410.0	20.0	1661.0	18.0	1661.0	18.0	15.1
11UPR02_73	0.68	-4800	5.100	0.600	0.1510	0.0130	0.2385	1830.0	110.0	911.0	70.0	3260.0	140.0	DISC	DISC	50.2
11UPR02_74	123.2	0.567	1.734	0.019	0.1671	0.0019	0.61639	1020.9	6.9	996.0	10.0	1082.0	11.0	996.0	10.0	2.4
11UPR02_75	142.9	2.892	3.009	0.031	0.2350	0.0028	0.69376	1410.5	8.0	1360.0	15.0	1483.9	8.3	1483.9	8.3	8.3
11UPR02_76	221	0.828	3.544	0.038	0.2513	0.0030	0.87111	1537.7	8.9	1445.0	15.0	1664.3	5.8	1664.3	5.8	13.2
11UPR02_77	179	0.713	3.753	0.031	0.2698	0.0022	0.61682	1583.1	6.7	1540.0	11.0	1635.5	7.7	1635.5	7.7	5.8
11UPR02_78	99	13.4	1.539	0.042	0.1523	0.0043	0.42468	945.0	17.0	913.0	24.0	1070.0	37.0	913.0	24.0	3.4
11UPR02_79	288	1.95	1.726	0.016	0.1682	0.0022	0.94938	1017.8	6.0	1002.0	12.0	1046.0	15.0	1002.0	12.0	1.6
11UPR02_80	242	1.727	3.257	0.048	0.2511	0.0030	0.8041	1470.0	11.0	1444.0	16.0	1503.0	10.0	1503.0	10.0	3.9
11UPR02_81	170	0.847	1.752	0.020	0.1708	0.0022	0.57198	1027.3	7.2	1016.0	12.0	1065.0	16.0	1016.0	12.0	1.1
11UPR02_82	114.5	1.079	0.531	0.007	0.0678	0.0008	0.16035	432.4	4.9	422.8	4.5	487.0	24.0	422.8	4.5	2.2
11UPR02_83	333	0.6437	3.744	0.033	0.2764	0.0030	0.89582	1580.4	7.0	1570.0	16.0	1596.3	6.9	1596.3	6.9	1.6
11UPR02_84	51	0.669	0.573	0.021	0.0703	0.0012	0.36984	458.0	13.0	437.8	7.3	580.0	60.0	437.8	7.3	4.4
11UPR02_85	46.8	0.505	4.213	0.065	0.2918	0.0030	0.47948	1677.0	12.0	1650.0	15.0	1700.0	16.0	1700.0	16.0	2.9
11UPR02_86	534	1.879	0.553	0.029	0.0688	0.0030	0.8322	444.0	19.0	428.0	18.0	545.0	53.0	428.0	18.0	3.6
11UPR02_87	139.8	2.597	4.876	0.044	0.3206	0.0025	0.63126	1798.5	7.7	1792.0	12.0	1795.7	9.0	1795.7	9.0	0.2
11UPR02_88	184	1.367	2.782	0.042	0.2276	0.0035	0.86765	1351.0	11.0	1322.0	18.0	1383.5	9.3	1383.5	9.3	4.4
11UPR02_89	191	1.674	4.862	0.034	0.3239	0.0023	0.58988	1795.4	6.0	1809.0	11.0	1791.1	7.3	1791.1	7.3	1.0
11UPR02_90	240	2.086	4.492	0.042	0.3023	0.0033	0.59203	1729.2	7.8	1702.0	17.0	1753.7	8.9	1753.7	8.9	2.9
11UPR02_91	189	2.248	4.799	0.043	0.3173	0.0036	0.54481	1784.1	7.6	1776.0	18.0	1805.0	12.0	1805.0	12.0	1.6
11UPR02_92	32.7	0.376	5.205	0.054	0.3323	0.0040	0.50597	1852.6	8.8	1851.0	19.0	1859.0	14.0	1859.0	14.0	0.4

11UPR02_93	490	1.99	2.000	0.230	0.1740	0.0140	0.97276	1079.0	79.0	1037.0	76.0	1209.0	65.0	1037.0	76.0	3.9
11UPR02_94	563	1.314	0.572	0.021	0.0641	0.0013	0.58754	453.7	9.1	400.4	7.8	765.0	78.0	400.4	7.8	11.7
11UPR02_95	277	1.584	5.536	0.041	0.3396	0.0024	0.83436	1905.8	6.3	1885.0	11.0	1929.2	6.8	1929.2	6.8	2.3
11UPR02_96	124	0.937	0.902	0.011	0.1026	0.0009	0.30132	652.6	5.9	629.7	5.5	706.0	16.0	629.7	5.5	3.5
11UPR02_97	405	1.123	0.497	0.018	0.0558	0.0015	0.15949	410.0	12.0	349.9	9.0	980.0	160.0	349.9	9.0	14.7
11UPR02_98	105	1.79	0.797	0.011	0.0947	0.0011	0.32347	594.5	6.3	583.4	6.3	626.0	19.0	583.4	6.3	1.9
11UPR02_99	605	1.211	0.571	0.018	0.0427	0.0024	0.47871	458.0	12.0	269.0	15.0	1591.0	97.0	DISC	DISC	41.3
11UPR02_100	96.7	1.86	1.939	0.022	0.1809	0.0019	0.33184	1095.0	7.5	1072.0	10.0	1148.0	15.0	1072.0	10.0	2.1
11UPR02_101	83.8	1.006	3.771	0.043	0.2741	0.0025	0.65558	1586.1	9.3	1561.0	12.0	1625.3	9.3	1625.3	9.3	4.0
11UPR02_102	101.5	1.639	2.738	0.039	0.2247	0.0029	0.79435	1338.0	11.0	1307.0	15.0	1399.0	11.0	1399.0	11.0	6.6
11UPR02_103	335	1.063	1.443	0.012	0.1502	0.0015	0.59459	906.6	5.1	902.1	8.5	916.0	10.0	902.1	8.5	0.5
11UPR02_104	131.4	0.855	1.830	0.021	0.1733	0.0012	0.4834	1055.9	7.4	1030.1	6.5	1094.0	13.0	1030.1	6.5	2.4
11UPR02_105	432	1.548	3.140	0.046	0.2375	0.0050	0.88771	1439.0	12.0	1373.0	26.0	1548.0	22.0	1548.0	22.0	11.3
11UPR02_106	108.6	1.254	0.786	0.015	0.0931	0.0016	0.016507	588.3	8.3	573.5	9.6	637.0	24.0	573.5	9.6	2.5
11UPR02_107	287.9	1.636	3.958	0.045	0.2740	0.0026	0.74076	1626.6	9.1	1561.0	13.0	1723.1	8.7	1723.1	8.7	9.4
11UPR02_108	118.3	1.051	2.674	0.033	0.2256	0.0022	0.56528	1320.4	9.3	1311.0	12.0	1328.0	10.0	1328.0	10.0	1.3
11UPR02_109	252	3.518	4.005	0.079	0.2784	0.0042	0.88956	1634.0	16.0	1583.0	21.0	1702.0	13.0	1702.0	13.0	7.0
11UPR02_110	86.8	0.947	1.767	0.032	0.1727	0.0021	0.7963	1032.0	12.0	1027.0	11.0	1064.0	14.0	1027.0	11.0	0.5
11UPR02_111	197.1	0.436	0.392	0.006	0.0533	0.0005	0.35019	335.3	4.2	334.5	3.2	329.0	19.0	334.5	3.2	0.2
11UPR02_112	57.2	0.6321	13.660	0.120	0.5351	0.0061	0.61615	2727.8	8.3	2762.0	26.0	2699.7	8.5	2699.7	8.5	2.3
11UPR02_113	460	15.4	0.507	0.018	0.0666	0.0024	0.97049	415.0	13.0	415.0	15.0	417.0	15.0	415.0	15.0	0.0
11UPR02_114	122.7	1.284	13.780	0.120	0.5152	0.0044	0.77857	2735.4	8.3	2678.0	19.0	2779.5	5.0	2779.5	5.0	3.7
11UPR02_115	142	2.65	3.644	0.029	0.2745	0.0019	0.68566	1558.9	6.2	1563.5	9.8	1552.5	8.0	1552.5	8.0	0.7
11UPR02_116	268	2.48	4.702	0.064	0.3050	0.0070	0.4759	1768.0	12.0	1715.0	34.0	1840.0	29.0	1840.0	29.0	6.8
11UPR02_117	126.2	1.487	2.963	0.022	0.2424	0.0019	0.54626	1397.8	5.7	1399.2	9.7	1389.9	6.8	1389.9	6.8	0.7
11UPR02_118	200.6	2.114	2.964	0.024	0.2305	0.0022	0.62386	1398.1	6.2	1337.0	12.0	1488.0	8.9	1488.0	8.9	10.1
11UPR02_119	280	1.001	3.004	0.053	0.2012	0.0046	0.031526	1408.0	13.0	1181.0	25.0	1767.0	46.0	1181.0	25.0	16.1
11UPR02_120	102.3	1.347	3.174	0.032	0.2536	0.0024	0.49584	1451.4	7.5	1457.0	12.0	1438.0	11.0	1438.0	11.0	1.3
11UPR03_1	175	2.81	1.920	0.040	0.1813	0.0039	0.56931	1090.0	14.0	1073.0	21.0	1126.0	27.0	1073.0	21.0	1.6
11UPR03_2	56.4	0.935	4.374	0.080	0.3024	0.0064	0.6478	1705.0	15.0	1702.0	32.0	1708.0	22.0	1708.0	22.0	0.4
11UPR03_3	137	1.096	4.349	0.074	0.3023	0.0057	0.55049	1701.0	14.0	1702.0	28.0	1712.0	18.0	1712.0	18.0	0.6
11UPR03_4	169	2.276	4.528	0.071	0.3071	0.0055	0.66907	1736.0	13.0	1725.0	27.0	1756.0	17.0	1756.0	17.0	1.8

11UPR03_5	118.3	1.5	1.998	0.041	0.1873	0.0043	0.73108	1113.0	14.0	1106.0	23.0	1116.0	19.0	1106.0	23.0	0.6
11UPR03_6	297	1.251	0.930	0.048	0.0979	0.0025	0.5329	662.0	24.0	604.0	14.0	851.0	66.0	604.0	14.0	8.8
11UPR03_7	218.6	1.448	1.923	0.029	0.1846	0.0032	0.53408	1088.0	10.0	1092.0	18.0	1085.0	17.0	1092.0	18.0	0.4
11UPR03_8	100.7	1.257	2.508	0.053	0.2157	0.0052	0.47469	1272.0	15.0	1258.0	27.0	1324.0	27.0	1324.0	27.0	5.0
11UPR03_9	267	0.706	3.820	0.130	0.2537	0.0097	0.77299	1594.0	27.0	1456.0	50.0	1779.0	26.0	1779.0	26.0	18.2
11UPR03_9	172.2	0.718	4.878	0.085	0.3182	0.0073	0.5732	1797.0	15.0	1780.0	36.0	1819.0	18.0	1819.0	18.0	2.1
11UPR03_10	107.4	1.577	2.704	0.050	0.2242	0.0060	0.49007	1330.0	14.0	1308.0	32.0	1385.0	27.0	1385.0	27.0	5.6
11UPR03_11	126.3	0.778	6.630	0.096	0.3623	0.0068	0.50154	2062.0	13.0	1992.0	32.0	2144.0	20.0	2144.0	20.0	7.1
11UPR03_12	379	10.9	0.903	0.023	0.1095	0.0030	0.67842	657.0	13.0	669.0	17.0	627.0	30.0	669.0	17.0	1.8
11UPR03_13	80.7	1.571	1.839	0.037	0.1747	0.0035	0.39091	1060.0	13.0	1037.0	19.0	1114.0	24.0	1037.0	19.0	2.2
11UPR03_14	136.2	2.33	4.611	0.083	0.3091	0.0053	0.58853	1751.0	15.0	1735.0	26.0	1781.0	14.0	1781.0	14.0	2.6
11UPR03_15	96	1.487	12.110	0.200	0.5080	0.0110	0.6101	2611.0	16.0	2647.0	45.0	2594.0	17.0	2594.0	17.0	2.0
11UPR03_16	139.1	1.73	1.977	0.051	0.1865	0.0041	0.688	1105.0	18.0	1102.0	22.0	1103.0	25.0	1102.0	22.0	0.3
11UPR03_17	102.5	0.908	2.120	0.039	0.1951	0.0037	0.55746	1154.0	13.0	1151.0	20.0	1197.0	21.0	1151.0	20.0	0.3
11UPR03_18	274	1.289	2.179	0.033	0.1977	0.0035	0.53724	1175.0	11.0	1162.0	19.0	1195.0	19.0	1162.0	19.0	1.1
11UPR03_19	15.7	1.034	1.693	0.056	0.1646	0.0045	0.18821	1005.0	22.0	981.0	25.0	1057.0	39.0	981.0	25.0	2.4
11UPR03_20	62.7	1.421	3.377	0.083	0.2290	0.0051	0.68658	1496.0	19.0	1328.0	26.0	1743.0	22.0	1743.0	22.0	23.8
11UPR03_21	123.3	2.283	2.626	0.052	0.2178	0.0048	0.59995	1306.0	15.0	1273.0	25.0	1369.0	17.0	1369.0	17.0	7.0
11UPR03_22	37.2	0.696	3.067	0.075	0.2431	0.0060	0.38425	1424.0	19.0	1401.0	31.0	1461.0	28.0	1461.0	28.0	4.1
11UPR03_23	39	1.085	3.946	0.085	0.2774	0.0063	0.50359	1622.0	18.0	1577.0	32.0	1662.0	24.0	1662.0	24.0	5.1
11UPR03_24	304	0.715	0.509	0.010	0.0648	0.0012	0.4089	417.4	6.9	404.8	7.1	467.0	29.0	404.8	7.1	3.0
11UPR03_25	218	2.434	2.433	0.069	0.1881	0.0049	0.78853	1249.0	21.0	1113.0	26.0	1494.0	17.0	1113.0	26.0	10.9
11UPR03_26	184	0.749	0.443	0.012	0.0586	0.0013	0.20535	371.6	8.6	367.9	8.0	415.0	36.0	367.9	8.0	1.0
11UPR03_27	68.2	1.451	3.366	0.066	0.2582	0.0057	0.43923	1495.0	15.0	1479.0	29.0	1516.0	27.0	1516.0	27.0	2.4
11UPR03_28	700	1.431	0.385	0.008	0.0529	0.0009	0.5872	330.8	5.9	332.1	5.6	339.0	25.0	332.1	5.6	0.4
11UPR03_29	89.7	1.168	3.705	0.087	0.2692	0.0055	0.66926	1572.0	19.0	1536.0	28.0	1626.0	20.0	1626.0	20.0	5.5
11UPR03_30	134.3	0.533	3.840	0.058	0.2726	0.0053	0.58084	1601.0	13.0	1553.0	27.0	1669.0	18.0	1669.0	18.0	7.0
11UPR03_31	189	0.946	11.220	0.210	0.4758	0.0090	0.70671	2539.0	18.0	2507.0	39.0	2575.0	13.0	2575.0	13.0	2.6
11UPR03_32	104.5	1.927	4.448	0.077	0.3039	0.0067	0.61839	1719.0	14.0	1709.0	33.0	1736.0	21.0	1736.0	21.0	1.6
11UPR03_33	54.6	1.996	1.837	0.052	0.1803	0.0042	0.2555	1058.0	18.0	1068.0	23.0	1038.0	37.0	1068.0	23.0	0.9
11UPR03_34	156.6	1.233	0.857	0.020	0.1035	0.0023	0.52095	629.0	11.0	635.0	14.0	606.0	25.0	635.0	14.0	1.0
11UPR03_35	38.4	0.778	3.970	0.087	0.2802	0.0061	0.38126	1630.0	18.0	1594.0	31.0	1691.0	23.0	1691.0	23.0	5.7
11UPR03_36	24.6	0.396	33.310	0.670	0.7430	0.0170	0.71044	3589.0	20.0	3575.0	62.0	3601.0	15.0	3601.0	15.0	0.7
11UPR03_37	141	3.54	1.845	0.035	0.1795	0.0032	0.21394	1062.0	12.0	1064.0	17.0	1077.0	25.0	1064.0	17.0	0.2
11UPR03_38	58.5	0.996	1.844	0.037	0.1779	0.0031	0.25626	1060.0	13.0	1055.0	17.0	1096.0	27.0	1055.0	17.0	0.5

11UPR03_39	204	15.9	1.567	0.027	0.1586	0.0030	0.33395	958.0	11.0	949.0	17.0	985.0	27.0	949.0	17.0	0.9
11UPR03_40	191	2.389	2.047	0.034	0.1902	0.0035	0.61475	1130.0	11.0	1124.0	18.0	1154.0	18.0	1124.0	18.0	0.5
11UPR03_41	489	0.939	0.434	0.010	0.0461	0.0015	0.02233	366.2	7.5	290.6	9.1	873.0	78.0	290.6	9.1	20.6
11UPR03_42	147.9	1.41	5.377	0.090	0.3352	0.0062	0.65791	1883.0	14.0	1862.0	30.0	1918.0	14.0	1918.0	14.0	2.9
11UPR03_43	27.88	0.93	15.060	0.270	0.5420	0.0110	0.69898	2817.0	17.0	2793.0	48.0	2832.0	15.0	2832.0	15.0	1.4
11UPR03_44	220	2.325	3.543	0.060	0.2707	0.0047	0.53209	1535.0	13.0	1544.0	24.0	1523.0	21.0	1523.0	21.0	1.4
11UPR03_45	36.3	0.86	1.673	0.045	0.1679	0.0050	0.29443	996.0	17.0	1000.0	28.0	1027.0	37.0	1000.0	28.0	0.4
11UPR03_46	134.5	1.706	1.736	0.035	0.1645	0.0037	0.59965	1022.0	13.0	983.0	20.0	1126.0	17.0	983.0	20.0	3.8
11UPR03_47	44.6	1.716	1.793	0.048	0.1747	0.0046	0.49705	1040.0	17.0	1037.0	25.0	1059.0	36.0	1037.0	25.0	0.3
11UPR03_48	206.4	1.6	5.579	0.094	0.3390	0.0054	0.53693	1915.0	14.0	1881.0	26.0	1959.0	21.0	1959.0	21.0	4.0
11UPR03_49	96.9	1.358	0.529	0.018	0.0691	0.0014	0.1467	430.0	12.0	430.4	8.2	431.0	47.0	430.4	8.2	0.1
11UPR03_50	152	1.393	5.347	0.091	0.3317	0.0064	0.507	1874.0	15.0	1849.0	30.0	1897.0	18.0	1897.0	18.0	2.5
11UPR03_51	35.1	1.101	10.820	0.260	0.4460	0.0120	0.60158	2506.0	22.0	2375.0	56.0	2625.0	24.0	2625.0	24.0	9.5
11UPR03_52	155	1.442	3.134	0.060	0.2557	0.0057	0.56846	1443.0	14.0	1467.0	29.0	1428.0	27.0	1428.0	27.0	2.7
11UPR03_53	168	0.805	0.512	0.012	0.0677	0.0016	0.31494	418.9	8.2	422.1	9.6	428.0	32.0	422.1	9.6	0.8
11UPR03_54	44.9	0.772	3.775	0.088	0.2749	0.0071	0.68966	1584.0	19.0	1569.0	35.0	1624.0	18.0	1624.0	18.0	3.4
11UPR03_55	21.8	0.561	3.287	0.082	0.2577	0.0069	0.48351	1477.0	19.0	1481.0	36.0	1471.0	32.0	1471.0	32.0	0.7
11UPR03_56	269	3.346	1.759	0.038	0.1718	0.0035	0.57662	1029.0	14.0	1022.0	19.0	1072.0	24.0	1022.0	19.0	0.7
11UPR03_57	40.7	1.01	0.695	0.026	0.0858	0.0025	0.1435	535.0	15.0	530.0	15.0	575.0	51.0	530.0	15.0	0.9
11UPR03_58	223.7	0.312	12.370	0.220	0.4813	0.0095	0.64048	2635.0	17.0	2530.0	41.0	2719.0	13.0	2719.0	13.0	7.0
11UPR03_59	98.9	1.876	1.852	0.040	0.1790	0.0035	0.39596	1062.0	14.0	1061.0	19.0	1076.0	29.0	1061.0	19.0	0.1
11UPR03_60	83.7	1.793	1.396	0.031	0.1444	0.0037	0.60429	888.0	14.0	869.0	21.0	946.0	35.0	869.0	21.0	2.1
11UPR03_61	234	4.79	0.614	0.011	0.0776	0.0015	0.42478	485.7	7.0	481.7	8.8	540.0	25.0	481.7	8.8	0.8
11UPR03_62	193	2.74	1.801	0.033	0.1761	0.0035	0.54135	1044.0	12.0	1045.0	19.0	1050.0	21.0	1045.0	19.0	0.1
11UPR03_63	83.5	1.21	1.747	0.037	0.1689	0.0034	0.46374	1024.0	14.0	1005.0	19.0	1070.0	24.0	1005.0	19.0	1.9
11UPR03_64	141.4	0.853	0.775	0.015	0.0942	0.0017	0.26566	581.7	8.8	579.9	9.7	617.0	31.0	579.9	9.7	0.3
11UPR03_65	96.1	0.561	0.840	0.028	0.0991	0.0021	0.41379	617.0	15.0	609.0	12.0	687.0	36.0	609.0	12.0	1.3
11UPR03_66	247	1.92	2.556	0.060	0.2214	0.0043	0.66197	1286.0	17.0	1288.0	23.0	1302.0	21.0	1302.0	21.0	1.1
11UPR03_67	167	1.477	4.164	0.081	0.2807	0.0053	0.71204	1667.0	16.0	1594.0	27.0	1764.0	14.0	1764.0	14.0	9.6
11UPR03_68	563	0.86	3.136	0.069	0.2539	0.0045	0.39337	1440.0	17.0	1458.0	23.0	1431.0	29.0	1431.0	29.0	1.9
11UPR03_69	502	156	1.959	0.031	0.1859	0.0034	0.58628	1102.0	11.0	1099.0	18.0	1138.0	16.0	1099.0	18.0	0.3
11UPR03_70	85.2	1.285	4.505	0.091	0.3036	0.0059	0.56669	1732.0	16.0	1708.0	29.0	1771.0	18.0	1771.0	18.0	3.6
11UPR03_71	182	0.919	5.407	0.094	0.3389	0.0061	0.63784	1886.0	15.0	1884.0	30.0	1886.0	15.0	1886.0	15.0	0.1
11UPR03_72	149.6	1.442	2.354	0.073	0.2014	0.0062	0.66845	1233.0	22.0	1182.0	34.0	1352.0	24.0	1182.0	34.0	4.1
11UPR03_73	155.7	1.246	5.760	0.120	0.3348	0.0067	0.53607	1941.0	17.0	1860.0	33.0	2033.0	19.0	2033.0	19.0	8.5

11UPR03_74	194	2.66	4.027	0.077	0.2908	0.0067	0.6009	1638.0	15.0	1645.0	34.0	1638.0	21.0	1638.0	21.0	0.4
11UPR03_75	132.6	1.196	4.878	0.080	0.3178	0.0051	0.40663	1798.0	14.0	1778.0	25.0	1815.0	18.0	1815.0	18.0	2.0
11UPR03_76	151.1	1.847	1.762	0.033	0.1713	0.0032	0.45757	1032.0	12.0	1019.0	18.0	1064.0	20.0	1019.0	18.0	1.3
11UPR03_77	124.1	0.832	1.734	0.038	0.1697	0.0035	0.55802	1021.0	14.0	1013.0	19.0	1043.0	29.0	1013.0	19.0	0.8
11UPR03_78	56.2	1.79	3.047	0.068	0.2470	0.0060	0.67967	1417.0	17.0	1422.0	31.0	1411.0	25.0	1411.0	25.0	0.8
11UPR03_79	272	0.828	0.404	0.008	0.0543	0.0009	0.16896	344.5	6.1	341.1	5.2	359.0	31.0	341.1	5.2	1.0
11UPR03_80	503	1.802	0.446	0.009	0.0595	0.0012	0.54277	375.0	5.9	372.6	7.1	403.0	24.0	372.6	7.1	0.6
11UPR03_81	55.1	0.85	2.117	0.051	0.1944	0.0045	0.52623	1156.0	17.0	1147.0	25.0	1183.0	25.0	1147.0	25.0	0.8
11UPR03_82	123.5	1.601	4.733	0.086	0.3118	0.0075	0.66891	1773.0	16.0	1747.0	37.0	1807.0	17.0	1807.0	17.0	3.3
11UPR03_83	202	1.133	1.933	0.044	0.1809	0.0037	0.72222	1091.0	15.0	1071.0	20.0	1150.0	19.0	1071.0	20.0	1.8
11UPR03_84	41.9	0.529	2.389	0.057	0.2062	0.0050	0.37592	1239.0	17.0	1211.0	27.0	1298.0	24.0	1298.0	24.0	6.7
11UPR03_85	314	1.169	0.817	0.019	0.0907	0.0027	0.16407	606.0	10.0	559.0	16.0	751.0	54.0	559.0	16.0	7.8
11UPR03_86	66.7	0.909	0.550	0.017	0.0699	0.0018	0.19774	444.0	11.0	435.0	11.0	482.0	33.0	435.0	11.0	2.0
11UPR03_87	17.5	0.293	4.090	0.140	0.2882	0.0079	0.51539	1645.0	27.0	1630.0	40.0	1674.0	36.0	1674.0	36.0	2.6
11UPR03_88	40.5	0.82	15.590	0.350	0.5240	0.0130	0.70272	2852.0	21.0	2713.0	55.0	2952.0	16.0	2952.0	16.0	8.1
11UPR03_89	279	1.214	3.427	0.054	0.2606	0.0050	0.57782	1513.0	12.0	1492.0	26.0	1539.0	17.0	1539.0	17.0	3.1
11UPR03_90	254	1.617	0.733	0.018	0.0870	0.0024	0.71394	557.0	11.0	537.0	14.0	655.0	25.0	537.0	14.0	3.6
11UPR03_91	67.8	2.811	4.383	0.099	0.2917	0.0060	0.78309	1706.0	19.0	1649.0	30.0	1804.0	20.0	1804.0	20.0	8.6
11UPR03_92	539	0.681	0.454	0.012	0.0577	0.0009	0.32451	379.3	8.1	361.5	5.7	472.0	33.0	361.5	5.7	4.7
11UPR03_93	123.1	1.792	3.853	0.075	0.2765	0.0059	0.54137	1604.0	15.0	1576.0	29.0	1655.0	19.0	1655.0	19.0	4.8
11UPR03_94	93	1.458	4.567	0.083	0.3123	0.0063	0.58827	1745.0	14.0	1755.0	30.0	1720.0	21.0	1720.0	21.0	2.0
11UPR03_95	128.7	0.794	4.164	0.056	0.2886	0.0046	0.49224	1667.0	11.0	1634.0	23.0	1707.0	16.0	1707.0	16.0	4.3
11UPR03_96	217.8	0.805	2.161	0.039	0.1953	0.0043	0.58123	1167.0	13.0	1149.0	23.0	1187.0	20.0	1149.0	23.0	1.5
11UPR03_97	202.4	2.45	1.720	0.030	0.1691	0.0029	0.52585	1016.0	11.0	1007.0	16.0	1050.0	14.0	1007.0	16.0	0.9
11UPR03_98	120	1.85	5.920	0.120	0.3411	0.0073	0.69629	1964.0	17.0	1890.0	35.0	2070.0	15.0	2070.0	15.0	8.7
11UPR03_99	263	1.272	6.840	0.110	0.3879	0.0064	0.58132	2091.0	14.0	2112.0	30.0	2081.0	13.0	2081.0	13.0	1.5
11UPR03_100	166	1.002	4.320	0.080	0.2975	0.0060	0.63585	1699.0	15.0	1678.0	30.0	1725.0	16.0	1725.0	16.0	2.7
11UPR03_101	99.9	2.548	4.859	0.098	0.3235	0.0071	0.64209	1795.0	17.0	1805.0	35.0	1802.0	18.0	1802.0	18.0	0.2
11UPR03_102	209	1.506	4.037	0.063	0.2911	0.0060	0.56225	1642.0	13.0	1646.0	30.0	1648.0	16.0	1648.0	16.0	0.1
11UPR03_103	85	1.706	1.965	0.039	0.1846	0.0039	0.51956	1102.0	13.0	1092.0	21.0	1152.0	25.0	1092.0	21.0	0.9
11UPR03_104	29.6	0.59	3.254	0.066	0.2461	0.0057	0.44376	1468.0	16.0	1417.0	29.0	1533.0	23.0	1533.0	23.0	7.6
11UPR03_105	41.7	0.692	3.962	0.084	0.2842	0.0061	0.48147	1626.0	18.0	1615.0	30.0	1650.0	18.0	1650.0	18.0	2.1
11UPR03_106	68.1	0.986	0.850	0.028	0.1001	0.0025	0.30083	625.0	16.0	615.0	15.0	676.0	44.0	615.0	15.0	1.6
11UPR03_107	283	1.03	3.737	0.054	0.2689	0.0046	0.56255	1580.0	12.0	1534.0	24.0	1654.0	16.0	1654.0	16.0	7.3
11UPR03_108	103.3	1.137	0.867	0.019	0.1015	0.0026	0.37427	634.5	9.8	623.0	15.0	687.0	36.0	623.0	15.0	1.8

11UPR03_109	641	7.32	4.380	0.110	0.2924	0.0087	0.50292	1709.0	21.0	1652.0	44.0	1816.0	42.0	1816.0	42.0	9.0
11UPR03_110	303	1.65	2.174	0.037	0.1950	0.0039	0.45386	1175.0	12.0	1148.0	21.0	1228.0	22.0	1148.0	21.0	2.3
11UPR03_111	38.4	0.902	5.060	0.130	0.3152	0.0073	0.60862	1827.0	21.0	1769.0	35.0	1890.0	25.0	1890.0	25.0	6.4
11UPR03_112	226.9	1.098	0.472	0.010	0.0616	0.0014	0.42931	392.3	7.1	385.3	8.3	422.0	35.0	385.3	8.3	1.8
11UPR03_113	119.9	1.496	7.120	0.150	0.3739	0.0075	0.38942	2123.0	18.0	2046.0	35.0	2213.0	27.0	2213.0	27.0	7.5
11UPR03_114	279	1.129	2.136	0.031	0.1896	0.0030	0.48352	1160.0	10.0	1119.0	16.0	1244.0	15.0	1119.0	16.0	3.5
11UPR03_115	334	0.924	0.380	0.008	0.0523	0.0012	0.6004	326.4	5.8	328.3	7.0	336.0	29.0	328.3	7.0	0.6
11UPR03_116	847	1.84	0.338	0.010	0.0417	0.0012	0.27217	295.4	7.6	263.0	7.4	573.0	94.0	263.0	7.4	11.0
11UPR03_117	34.8	0.674	2.331	0.054	0.2036	0.0052	0.48276	1219.0	16.0	1198.0	29.0	1286.0	31.0	1198.0	29.0	1.7
11UPR03_118	134.4	1.251	1.871	0.049	0.1775	0.0035	0.43421	1068.0	17.0	1053.0	19.0	1112.0	38.0	1053.0	19.0	1.4
11UPR03_119	158.5	2.383	1.813	0.029	0.1762	0.0035	0.56691	1049.0	10.0	1046.0	19.0	1047.0	20.0	1046.0	19.0	0.3
11UPR03_120	211	1.175	5.104	0.094	0.3306	0.0070	0.65335	1835.0	16.0	1839.0	34.0	1836.0	17.0	1836.0	17.0	0.2
11UPR03_121	75.5	1.157	3.218	0.051	0.2461	0.0047	0.42016	1464.0	13.0	1418.0	24.0	1523.0	24.0	1523.0	24.0	6.9
11UPR04_1	75.4	1.8	3.837	0.073	0.2785	0.0057	0.70285	1602.0	15.0	1583.0	28.0	1610.0	16.0	1610.0	16.0	1.7
11UPR04_2	181	0.943	1.878	0.055	0.1331	0.0044	0.79529	1071.0	19.0	805.0	25.0	1692.0	24.0	805.0	25.0	24.8
11UPR04_3	223	0.801	1.880	0.110	0.1551	0.0054	0.3661	1071.0	37.0	929.0	30.0	1400.0	96.0	929.0	30.0	13.3
11UPR04_3	162	0.677	2.405	0.053	0.2204	0.0052	0.72102	1243.0	16.0	1283.0	27.0	1184.0	23.0	1184.0	27.0	3.2
11UPR04_5	163.9	0.688	3.597	0.060	0.2628	0.0052	0.63088	1549.0	13.0	1503.0	26.0	1622.0	18.0	1622.0	18.0	7.3
11UPR04_6	45.4	1.54	0.771	0.027	0.0927	0.0026	0.56949	584.0	15.0	571.0	15.0	598.0	43.0	571.0	15.0	2.2
11UPR04_7	143.5	0.635	1.561	0.028	0.1579	0.0030	0.67152	955.0	11.0	945.0	17.0	971.0	18.0	945.0	17.0	1.0
11UPR04_8	520	2.158	1.754	0.024	0.1702	0.0032	0.48537	1028.1	8.8	1013.0	18.0	1052.0	19.0	1013.0	18.0	1.5
11UPR04_9	137.9	7.69	2.246	0.044	0.2019	0.0041	0.61969	1197.0	14.0	1185.0	22.0	1223.0	16.0	1185.0	22.0	1.0
11UPR04_10	11.12	-89	1.001	0.065	0.0898	0.0035	0.074307	695.0	32.0	554.0	21.0	1180.0	82.0	554.0	21.0	20.3
11UPR04_11	76.4	1.557	4.808	0.081	0.3182	0.0074	0.57423	1786.0	14.0	1779.0	36.0	1781.0	23.0	1781.0	23.0	0.1
11UPR04_12	122.4	3.707	4.350	0.081	0.3052	0.0055	0.59446	1705.0	15.0	1716.0	27.0	1716.0	18.0	1716.0	18.0	0.0
11UPR04_13	47.25	1.312	6.820	0.120	0.3751	0.0075	0.50242	2087.0	16.0	2052.0	35.0	2129.0	22.0	2129.0	22.0	3.6
11UPR04_14	483	1.339	0.523	0.010	0.0680	0.0015	0.56915	427.0	6.5	424.1	9.1	467.0	35.0	424.1	9.1	0.7
11UPR04_15	590	1.061	1.718	0.072	0.1221	0.0048	0.71006	1011.0	26.0	742.0	28.0	1639.0	19.0	742.0	28.0	26.6
11UPR04_16	125.1	1.514	15.680	0.280	0.5410	0.0140	0.48472	2859.0	18.0	2798.0	56.0	2918.0	20.0	2918.0	20.0	4.1
11UPR04_17	204	1.306	0.619	0.015	0.0782	0.0016	0.42294	489.6	9.3	485.5	9.3	502.0	30.0	485.5	9.3	0.8
11UPR04_18	236.3	2.71	1.881	0.058	0.1817	0.0066	0.68647	1078.0	22.0	1076.0	36.0	1075.0	40.0	1076.0	36.0	0.2
11UPR04_18	145	2.2	3.670	0.140	0.2782	0.0092	0.75502	1577.0	29.0	1581.0	46.0	1563.0	30.0	1563.0	30.0	1.2
11UPR04_19	177.2	1.424	0.820	0.014	0.0983	0.0017	0.30351	607.3	7.8	605.0	10.0	621.0	31.0	605.0	10.0	0.4

11UPR04_20	184.1	0.955	0.897	0.068	0.0736	0.0025	0.35519	633.0	24.0	457.0	15.0	1290.0	120.0	457.0	15.0	27.8
11UPR04_21	286.6	1.122	4.300	0.100	0.2880	0.0086	0.54542	1692.0	19.0	1631.0	43.0	1772.0	31.0	1772.0	31.0	8.0
11UPR04_21	175.3	1.148	4.900	0.100	0.3215	0.0071	0.63037	1800.0	17.0	1796.0	35.0	1797.0	18.0	1797.0	18.0	0.1
11UPR04_22	102	1.089	18.890	0.280	0.6050	0.0120	0.5539	3034.0	15.0	3046.0	47.0	3040.0	14.0	3040.0	14.0	0.2
11UPR04_23	197.7	0.622	2.249	0.038	0.2048	0.0041	0.63214	1195.0	12.0	1200.0	22.0	1196.0	16.0	1196.0	22.0	0.4
11UPR04_24	110.4	1.254	3.398	0.076	0.2392	0.0047	0.73175	1508.0	17.0	1382.0	24.0	1676.0	15.0	1676.0	15.0	17.5
11UPR04_25	66.8	0.551	12.640	0.260	0.4910	0.0110	0.74093	2650.0	20.0	2573.0	49.0	2703.0	15.0	2703.0	15.0	4.8
11UPR04_26	129.2	1.183	13.280	0.220	0.5220	0.0100	0.68214	2698.0	15.0	2711.0	43.0	2694.0	11.0	2694.0	11.0	0.6
11UPR04_27	368	1.51	0.453	0.013	0.0564	0.0021	0.70598	379.0	9.0	354.0	13.0	580.0	50.0	354.0	13.0	6.6
11UPR04_28	90.2	1.013	3.923	0.079	0.2871	0.0059	0.57553	1618.0	16.0	1626.0	29.0	1619.0	22.0	1619.0	22.0	0.4
11UPR04_29	122.8	3.548	4.435	0.077	0.3029	0.0051	0.53194	1717.0	14.0	1705.0	25.0	1756.0	18.0	1756.0	18.0	2.9
11UPR04_30	323	13	1.692	0.048	0.1694	0.0036	0.74378	1008.0	17.0	1008.0	20.0	1046.0	27.0	1008.0	20.0	0.0
11UPR04_31	134	0.87	3.362	0.055	0.2651	0.0051	0.63641	1494.0	13.0	1515.0	26.0	1471.0	18.0	1471.0	18.0	3.0
11UPR04_32	205	1.321	1.691	0.032	0.1682	0.0036	0.69956	1006.0	12.0	1002.0	20.0	1041.0	18.0	1002.0	20.0	0.4
11UPR04_33	77	1.314	2.036	0.043	0.1898	0.0034	0.52516	1128.0	14.0	1122.0	18.0	1125.0	22.0	1122.0	18.0	0.5
11UPR04_34	48.3	5.37	1.576	0.055	0.1576	0.0045	0.43892	958.0	22.0	943.0	25.0	1016.0	34.0	943.0	25.0	1.6
11UPR04_35	174	1.056	2.682	0.045	0.2286	0.0050	0.64591	1322.0	12.0	1330.0	25.0	1316.0	17.0	1316.0	17.0	1.1
11UPR04_36	178	0.979	0.807	0.018	0.0997	0.0022	0.42093	600.0	10.0	613.0	13.0	561.0	32.0	613.0	13.0	2.2
11UPR04_37	114.7	1.246	1.888	0.040	0.1810	0.0038	0.6809	1077.0	14.0	1072.0	21.0	1103.0	22.0	1072.0	21.0	0.5
11UPR04_38	292.1	5.04	3.970	0.056	0.2850	0.0058	0.61106	1629.0	12.0	1615.0	29.0	1653.0	16.0	1653.0	16.0	2.3
11UPR04_39	43.1	1.364	15.170	0.270	0.5380	0.0120	0.60049	2824.0	17.0	2775.0	48.0	2850.0	16.0	2850.0	16.0	2.6
11UPR04_40	45.1	1.802	1.706	0.039	0.1718	0.0044	0.43275	1009.0	15.0	1021.0	24.0	1008.0	33.0	1021.0	24.0	1.2
11UPR04_41	236	1.343	0.549	0.011	0.0725	0.0016	0.47253	444.0	7.2	451.3	9.3	421.0	26.0	451.3	9.3	1.6
11UPR04_42	133.8	0.874	1.793	0.034	0.1770	0.0038	0.55814	1043.0	13.0	1050.0	21.0	1051.0	22.0	1050.0	21.0	0.7
11UPR04_43	160	0.942	4.470	0.110	0.2943	0.0065	0.76556	1728.0	21.0	1662.0	32.0	1807.0	21.0	1807.0	21.0	8.0
11UPR04_44	253	1.956	3.891	0.056	0.2775	0.0052	0.45723	1612.0	11.0	1578.0	26.0	1652.0	19.0	1652.0	19.0	4.5
11UPR04_45	165.1	0.63	4.262	0.075	0.2947	0.0056	0.62138	1684.0	15.0	1664.0	28.0	1706.0	16.0	1706.0	16.0	2.5
11UPR04_46	124	2.026	1.795	0.029	0.1753	0.0040	0.36391	1044.0	11.0	1040.0	22.0	1049.0	24.0	1040.0	22.0	0.4
11UPR04_47	271	0.898	0.402	0.010	0.0539	0.0011	0.17015	342.4	7.3	338.1	6.7	369.0	30.0	338.1	6.7	1.3
11UPR04_48	184.8	2.573	1.972	0.036	0.1833	0.0043	0.58775	1105.0	12.0	1084.0	23.0	1141.0	24.0	1084.0	23.0	1.9
11UPR04_49	14.25	2.85	1.146	0.073	0.1160	0.0059	0.23438	770.0	35.0	707.0	34.0	1067.0	98.0	707.0	34.0	8.2
11UPR04_50	168.1	0.507	4.123	0.067	0.2944	0.0054	0.53755	1659.0	13.0	1666.0	26.0	1655.0	14.0	1655.0	14.0	0.7
11UPR04_51	145	1.104	1.190	0.170	0.0953	0.0024	0.7477	723.0	49.0	587.0	14.0	1190.0	160.0	587.0	14.0	18.8
11UPR04_52	599	2.77	0.453	0.009	0.0599	0.0010	0.56255	380.7	6.3	374.9	6.1	414.0	22.0	374.9	6.1	1.5
11UPR04_53	123.4	1.203	4.050	0.070	0.2915	0.0057	0.60077	1644.0	14.0	1648.0	28.0	1659.0	18.0	1659.0	18.0	0.7

11UPR04_54	248	1.134	3.181	0.059	0.2482	0.0044	0.6245	1451.0	14.0	1431.0	22.0	1498.0	13.0	1498.0	13.0	4.5
11UPR04_55	190	1.371	3.602	0.072	0.2793	0.0061	0.68994	1550.0	16.0	1586.0	31.0	1495.0	17.0	1495.0	17.0	6.1
11UPR04_56	20.38	1.012	1.749	0.056	0.1636	0.0048	0.43867	1026.0	21.0	980.0	26.0	1172.0	45.0	980.0	26.0	4.5
11UPR04_57	96.4	0.933	3.430	0.120	0.2562	0.0051	0.65475	1524.0	30.0	1470.0	26.0	1559.0	45.0	1559.0	45.0	5.7
11UPR04_58	95.3	1.207	2.637	0.050	0.2246	0.0040	0.55155	1311.0	14.0	1306.0	21.0	1335.0	19.0	1335.0	19.0	2.2
11UPR04_59	258	0.433	0.848	0.015	0.1005	0.0019	0.4135	623.1	8.3	617.0	11.0	632.0	23.0	617.0	11.0	1.0
11UPR04_60	86.5	0.485	1.796	0.035	0.1726	0.0037	0.53413	1043.0	13.0	1026.0	20.0	1094.0	30.0	1026.0	20.0	1.6
11UPR04_61	30	0.563	2.870	0.240	0.1858	0.0056	0.68831	1341.0	60.0	1098.0	30.0	1790.0	120.0	1098.0	30.0	18.1
11UPR04_62	113.9	0.637	4.024	0.065	0.2891	0.0060	0.59028	1637.0	13.0	1636.0	30.0	1654.0	14.0	1654.0	14.0	1.1
11UPR04_64	339	2.78	1.822	0.030	0.1778	0.0038	0.63226	1052.0	11.0	1054.0	21.0	1051.0	20.0	1054.0	21.0	0.2
11UPR04_65	235.2	0.674	0.514	0.010	0.0682	0.0013	0.53463	421.8	6.8	425.4	7.6	442.0	25.0	425.4	7.6	0.9
11UPR04_66	379	1.516	4.233	0.064	0.3012	0.0048	0.49608	1679.0	12.0	1696.0	24.0	1661.0	18.0	1661.0	18.0	2.1
11UPR04_67	752	2.28	3.425	0.097	0.2308	0.0074	0.74914	1513.0	21.0	1338.0	39.0	1773.0	31.0	1773.0	31.0	24.5
11UPR04_68	108.2	1.564	4.731	0.098	0.3195	0.0069	0.63349	1772.0	17.0	1790.0	33.0	1739.0	17.0	1739.0	17.0	2.9
11UPR04_69	80.8	0.986	3.285	0.065	0.2571	0.0052	0.57339	1475.0	15.0	1474.0	26.0	1496.0	21.0	1496.0	21.0	1.5
11UPR04_70	153	2.041	2.043	0.046	0.1855	0.0042	0.49788	1132.0	16.0	1099.0	23.0	1206.0	30.0	1099.0	23.0	2.9
11UPR04_71	101.5	0.731	0.462	0.015	0.0609	0.0014	0.34211	385.0	10.0	381.1	8.5	428.0	43.0	381.1	8.5	1.0
11UPR04_72	22.6	1.984	2.232	0.068	0.2011	0.0050	0.42379	1190.0	21.0	1180.0	27.0	1226.0	30.0	1180.0	27.0	0.8
11UPR04_73	290	0.846	0.502	0.009	0.0665	0.0012	0.40175	412.7	6.2	415.2	7.5	422.0	24.0	415.2	7.5	0.6
11UPR04_74	553	0.711	0.486	0.009	0.0608	0.0016	0.70082	401.6	6.2	380.2	9.6	527.0	21.0	380.2	9.6	5.3
11UPR04_75	80.2	0.594	0.777	0.031	0.0907	0.0019	0.13608	583.0	18.0	559.0	11.0	657.0	60.0	559.0	11.0	4.1
11UPR04_76	408	2.59	1.949	0.036	0.1841	0.0031	0.51845	1098.0	13.0	1091.0	17.0	1137.0	21.0	1091.0	17.0	0.6
11UPR04_77	203	2.11	4.972	0.096	0.3258	0.0088	0.71449	1813.0	16.0	1816.0	43.0	1811.0	23.0	1811.0	23.0	0.3
11UPR04_78	364	1.567	0.754	0.037	0.0849	0.0031	0.73335	567.0	21.0	527.0	18.0	785.0	50.0	527.0	18.0	7.1
11UPR04_79	86	0.693	5.410	0.100	0.3427	0.0064	0.47934	1888.0	16.0	1898.0	31.0	1888.0	17.0	1888.0	17.0	0.5
11UPR04_80	69.8	0.873	2.180	0.057	0.1941	0.0050	0.55048	1178.0	19.0	1143.0	27.0	1244.0	28.0	1143.0	27.0	3.0
11UPR04_81	332.8	0.49	3.332	0.055	0.2352	0.0047	0.60633	1487.0	13.0	1361.0	25.0	1676.0	16.0	1676.0	16.0	18.8
11UPR04_82	306	4.07	0.446	0.010	0.0600	0.0011	0.4091	376.2	7.0	375.6	6.7	391.0	27.0	375.6	6.7	0.2
11UPR04_83	107.6	1.848	1.886	0.038	0.1841	0.0038	0.5013	1074.0	13.0	1089.0	20.0	1052.0	21.0	1089.0	20.0	1.4
11UPR04_84	322	1.163	4.151	0.069	0.2919	0.0060	0.65965	1663.0	14.0	1650.0	30.0	1688.0	17.0	1688.0	17.0	2.3
11UPR04_85	344	0.38	1.515	0.029	0.1540	0.0032	0.62149	938.0	12.0	923.0	18.0	967.0	22.0	923.0	18.0	1.6
11UPR04_86	253	1.117	0.603	0.012	0.0701	0.0017	0.40472	478.5	7.7	436.0	10.0	666.0	35.0	436.0	10.0	8.9
11UPR04_87	629	1.334	0.172	0.004	0.0252	0.0006	0.32129	161.0	3.1	160.6	3.5	218.0	33.0	160.6	3.5	0.2
11UPR04_88	76.6	0.457	0.843	0.022	0.1001	0.0021	0.22186	621.0	12.0	615.0	12.0	653.0	36.0	615.0	12.0	1.0
11UPR04_89	251	2.94	4.253	0.075	0.3008	0.0070	0.56953	1683.0	15.0	1694.0	35.0	1681.0	24.0	1681.0	24.0	0.8

11UPR04_90	136.1	1.534	2.506	0.049	0.2194	0.0052	0.57097	1272.0	14.0	1282.0	27.0	1287.0	25.0	1287.0	25.0	0.4
11UPR04_91	50.8	0.811	1.045	0.027	0.1189	0.0031	0.28156	730.0	13.0	724.0	18.0	747.0	41.0	724.0	18.0	0.8
11UPR04_92	55.9	1.866	3.721	0.077	0.2625	0.0053	0.33933	1578.0	17.0	1502.0	27.0	1666.0	24.0	1666.0	24.0	9.8
11UPR04_93	86.9	1.251	3.543	0.077	0.2700	0.0053	0.59098	1536.0	17.0	1540.0	27.0	1508.0	18.0	1508.0	18.0	2.1
11UPR04_94	195.6	1.386	0.500	0.011	0.0655	0.0016	0.44587	411.2	7.2	408.6	9.6	445.0	27.0	408.6	9.6	0.6
11UPR04_95	359	9.4	1.565	0.051	0.1561	0.0079	0.68823	955.0	20.0	934.0	44.0	1052.0	51.0	934.0	44.0	2.2
11UPR04_96	84.5	1.764	4.242	0.064	0.2910	0.0062	0.61282	1683.0	13.0	1645.0	31.0	1736.0	17.0	1736.0	17.0	5.2
11UPR04_97	296	1.212	0.746	0.014	0.0892	0.0020	0.56375	565.2	8.2	550.0	12.0	635.0	27.0	550.0	12.0	2.7
11UPR04_98	189	1.068	0.930	0.019	0.1078	0.0027	0.44505	668.0	10.0	660.0	16.0	715.0	28.0	660.0	16.0	1.2
11UPR04_99	49.5	0.791	3.798	0.082	0.2778	0.0073	0.55699	1594.0	17.0	1578.0	37.0	1634.0	23.0	1634.0	23.0	3.4
11UPR04_100	58.5	0.882	2.608	0.068	0.2154	0.0055	0.57245	1302.0	19.0	1256.0	29.0	1391.0	24.0	1391.0	24.0	9.7
11UPR04_101	90.9	0.759	4.138	0.073	0.2912	0.0063	0.68803	1662.0	15.0	1650.0	31.0	1694.0	15.0	1694.0	15.0	2.6
11UPR04_102	284	0.928	0.554	0.013	0.0705	0.0018	0.60136	446.7	8.6	439.0	11.0	482.0	32.0	439.0	11.0	1.7
11UPR04_103	61	0.641	1.883	0.049	0.1768	0.0039	0.45635	1072.0	17.0	1049.0	21.0	1112.0	37.0	1049.0	21.0	2.1
11UPR04_104	213	1.013	4.330	0.130	0.3030	0.0068	0.38187	1693.0	24.0	1705.0	34.0	1673.0	29.0	1673.0	29.0	1.9
11UPR04_105	84.6	0.933	3.860	0.069	0.2744	0.0051	0.38816	1603.0	14.0	1562.0	26.0	1658.0	22.0	1658.0	22.0	5.8
11UPR04_106	434	4.31	0.913	0.019	0.1037	0.0019	0.45239	657.7	9.9	636.0	11.0	717.0	27.0	636.0	11.0	3.3
11UPR04_107	70.4	1.431	2.081	0.047	0.1954	0.0045	0.29844	1142.0	15.0	1150.0	24.0	1129.0	30.0	1150.0	24.0	0.7
11UPR04_108	123	1.209	4.868	0.085	0.3231	0.0059	0.60073	1797.0	14.0	1807.0	29.0	1811.0	16.0	1811.0	16.0	0.2
11UPR04_109	160	1.18	4.217	0.074	0.3015	0.0058	0.5924	1675.0	14.0	1701.0	28.0	1654.0	19.0	1654.0	19.0	2.8
11UPR04_110	226	0.909	15.290	0.290	0.5550	0.0120	0.79559	2830.0	18.0	2848.0	49.0	2821.0	14.0	2821.0	14.0	1.0
11UPR04_111	95	0.783	3.726	0.063	0.2688	0.0060	0.59746	1577.0	14.0	1533.0	30.0	1640.0	17.0	1640.0	17.0	6.5
11UPR04_112	247	1.544	2.961	0.060	0.2387	0.0057	0.71603	1396.0	15.0	1379.0	30.0	1442.0	18.0	1442.0	18.0	4.4
11UPR04_113	191.1	1.129	2.080	0.037	0.1901	0.0035	0.6463	1141.0	12.0	1122.0	19.0	1168.0	17.0	1122.0	19.0	1.7
11UPR04_114	61.8	1.181	2.821	0.057	0.2343	0.0049	0.52064	1359.0	15.0	1356.0	26.0	1390.0	27.0	1390.0	27.0	2.4
11UPR04_115	56.8	1.58	2.153	0.050	0.1952	0.0038	0.41451	1164.0	16.0	1152.0	21.0	1190.0	26.0	1152.0	21.0	1.0
11UPR04_116	31.7	0.81	1.797	0.053	0.1741	0.0046	0.44632	1044.0	19.0	1034.0	25.0	1086.0	30.0	1034.0	25.0	1.0
11UPR04_117	102.3	1.688	2.147	0.043	0.1988	0.0040	0.57363	1170.0	14.0	1171.0	22.0	1162.0	17.0	1171.0	22.0	0.1
11UPR04_118	180.5	0.539	0.517	0.013	0.0653	0.0014	0.22	422.7	8.6	407.8	8.5	494.0	41.0	407.8	8.5	3.5
11UPR04_119	477	1.276	0.408	0.009	0.0548	0.0010	0.38727	346.8	6.4	344.2	6.3	371.0	26.0	344.2	6.3	0.7
11UPR04_120	160.8	1.395	5.222	0.092	0.3441	0.0077	0.76745	1856.0	15.0	1910.0	36.0	1811.0	17.0	1811.0	17.0	5.5
11UPR04_121	469	2.27	2.016	0.042	0.1878	0.0043	0.82572	1119.0	14.0	1109.0	23.0	1163.0	14.0	1109.0	23.0	0.9
11UPR05_1	119	3.63	2.100	0.110	0.1291	0.0081	0.72866	1150.0	36.0	791.0	44.0	1930.0	76.0	DISC	DISC	31.2

11UPR05_1	26.2	2.34	3.570	0.180	0.2390	0.0100	0.67201	1537.0	41.0	1381.0	52.0	1816.0	77.0	1816.0	77.0	24.0
11UPR05_2	75.7	1.712	3.142	0.048	0.2480	0.0043	0.4411	1447.0	12.0	1428.0	22.0	1483.0	30.0	1483.0	30.0	3.7
11UPR05_3	206	4.8	13.730	0.150	0.5277	0.0072	0.5893	2730.0	11.0	2730.0	30.0	2727.0	18.0	2727.0	18.0	0.1
11UPR05_4	104.6	1.749	2.320	0.034	0.2085	0.0022	0.24754	1217.0	10.0	1222.0	12.0	1219.0	31.0	1219.0	31.0	0.2
11UPR05_5	542	15.4	0.935	0.044	0.0821	0.0025	0.46893	668.0	24.0	509.0	15.0	1210.0	100.0	509.0	15.0	23.8
11UPR05_6	200.3	1.502	3.882	0.044	0.2637	0.0023	0.44097	1610.4	9.4	1508.0	12.0	1751.0	20.0	1751.0	20.0	13.9
11UPR05_7	182.8	1.874	2.270	0.029	0.2074	0.0029	0.70693	1203.8	8.8	1215.0	15.0	1177.0	23.0	1177.0	15.0	0.9
11UPR05_8	248	1.86	1.541	0.025	0.1559	0.0024	0.56173	947.5	9.8	934.0	13.0	990.0	32.0	934.0	13.0	1.4
11UPR05_9	124	2.898	3.426	0.079	0.2634	0.0069	0.71242	1508.0	18.0	1512.0	34.0	1492.0	36.0	1492.0	36.0	1.3
11UPR05_10	165.1	1.922	1.954	0.025	0.1859	0.0027	0.55138	1099.1	8.7	1099.0	15.0	1111.0	30.0	1099.0	15.0	0.0
11UPR05_11	128.7	0.799	2.634	0.038	0.2229	0.0029	0.48127	1312.0	10.0	1297.0	15.0	1343.0	26.0	1343.0	26.0	3.4
11UPR05_12	106	2.45	0.524	0.015	0.0679	0.0013	0.22231	426.0	10.0	423.4	7.7	453.0	70.0	423.4	7.7	0.6
11UPR05_13	237.8	0.833	0.450	0.010	0.0594	0.0006	0.32897	376.7	6.7	372.0	3.7	392.0	50.0	372.0	3.7	1.2
11UPR05_14	160	4.19	2.029	0.040	0.1844	0.0036	0.69491	1124.0	13.0	1093.0	19.0	1184.0	32.0	1093.0	19.0	2.8
11UPR05_16	626	4	4.134	0.041	0.2813	0.0036	0.7429	1660.6	8.1	1598.0	18.0	1739.0	16.0	1739.0	16.0	8.1
11UPR05_17	283	2.503	3.786	0.056	0.2691	0.0047	0.76383	1590.0	12.0	1535.0	24.0	1675.0	21.0	1675.0	21.0	8.4
11UPR05_19	118.5	2.544	3.531	0.074	0.2624	0.0059	0.60481	1534.0	16.0	1501.0	30.0	1570.0	40.0	1570.0	40.0	4.4
11UPR05_20	119	1.566	5.259	0.062	0.3357	0.0036	0.51859	1863.0	10.0	1865.0	17.0	1866.0	21.0	1866.0	21.0	0.1
11UPR05_21	755	11.1	1.716	0.018	0.1723	0.0022	0.74871	1014.0	6.7	1024.0	12.0	996.0	16.0	1024.0	12.0	1.0
11UPR05_22	44.2	1.003	4.386	0.097	0.2940	0.0065	0.78283	1712.0	19.0	1660.0	32.0	1779.0	30.0	1779.0	30.0	6.7
11UPR05_23	60.7	1.654	0.764	0.066	0.0847	0.0036	0.6323	581.0	39.0	524.0	21.0	810.0	160.0	524.0	21.0	9.8
11UPR05_24	460	1.257	0.512	0.008	0.0669	0.0007	0.32748	419.8	5.2	417.5	4.2	433.0	34.0	417.5	4.2	0.5
11UPR05_25	317	3.24	0.937	0.016	0.1075	0.0017	0.46792	672.0	8.8	659.2	9.9	729.0	34.0	659.2	9.9	1.9
11UPR05_26	118.5	1.743	3.080	0.050	0.2367	0.0036	0.38224	1427.0	12.0	1369.0	19.0	1498.0	32.0	1498.0	32.0	8.6
11UPR05_27	741	19.2	0.765	0.012	0.0895	0.0016	0.789	578.4	7.0	552.4	9.7	689.0	25.0	552.4	9.7	4.5
11UPR05_28	96.8	1.306	5.136	0.089	0.3250	0.0059	0.65536	1842.0	15.0	1813.0	29.0	1872.0	25.0	1872.0	25.0	3.2
11UPR05_29	89.9	1.275	3.287	0.049	0.2561	0.0052	0.54335	1477.0	12.0	1469.0	27.0	1500.0	36.0	1500.0	36.0	2.1
11UPR05_30	205.9	259	1.643	0.035	0.1649	0.0040	0.49739	985.0	13.0	983.0	22.0	1012.0	41.0	983.0	22.0	0.2
11UPR05_31	351	2.71	0.526	0.013	0.0653	0.0014	0.57519	428.9	8.4	407.9	8.6	549.0	47.0	407.9	8.6	4.9
11UPR05_32	75.7	2.273	1.733	0.033	0.1771	0.0020	0.20202	1020.0	12.0	1051.0	11.0	967.0	42.0	1051.0	11.0	3.0
11UPR05_33	157	2.244	1.540	0.038	0.1518	0.0041	0.77865	945.0	15.0	911.0	23.0	1047.0	30.0	911.0	23.0	3.6
11UPR05_34	158.3	1.492	3.900	0.100	0.2790	0.0072	0.93786	1612.0	22.0	1586.0	37.0	1656.0	29.0	1656.0	29.0	4.2
11UPR05_35	216	1.944	2.147	0.027	0.2010	0.0028	0.31851	1163.3	8.8	1180.0	15.0	1138.0	30.0	1180.0	15.0	1.4
11UPR05_36	324	1.016	0.857	0.013	0.1024	0.0011	0.29572	627.7	7.2	628.2	6.7	629.0	33.0	628.2	6.7	0.1
11UPR05_37	269	1.73	3.686	0.082	0.2567	0.0068	0.8277	1566.0	18.0	1471.0	35.0	1715.0	32.0	1715.0	32.0	14.2

11UPR05_38	541	2.162	4.213	0.036	0.2941	0.0027	0.71765	1678.2	6.6	1662.0	13.0	1695.0	13.0	1695.0	13.0	1.9
11UPR05_39	108.6	1.062	9.050	0.110	0.4355	0.0065	0.62023	2344.0	11.0	2329.0	29.0	2342.0	21.0	2342.0	21.0	0.6
11UPR05_40	196	2.178	2.084	0.037	0.1899	0.0032	0.55168	1142.0	12.0	1120.0	17.0	1184.0	31.0	1120.0	17.0	1.9
11UPR05_41	42.9	0.852	10.610	0.190	0.4196	0.0070	0.54991	2496.0	17.0	2258.0	32.0	2706.0	27.0	2706.0	27.0	16.6
11UPR05_42	428	2.113	0.540	0.008	0.0710	0.0006	0.42432	438.6	4.9	442.2	3.8	421.0	26.0	442.2	3.8	0.8
11UPR05_43	72.9	1.035	5.042	0.095	0.3258	0.0050	0.8403	1826.0	16.0	1820.0	25.0	1813.0	23.0	1813.0	23.0	0.4
11UPR05_44	100.6	1.334	1.063	0.019	0.1176	0.0017	0.18931	734.3	9.6	716.4	9.8	777.0	43.0	716.4	9.8	2.4
11UPR05_45	328	2.68	4.621	0.064	0.3091	0.0039	0.49756	1753.0	11.0	1735.0	19.0	1769.0	19.0	1769.0	19.0	1.9
11UPR05_46	266	2.162	2.566	0.041	0.2122	0.0029	0.71561	1294.0	12.0	1243.0	16.0	1385.0	23.0	1385.0	23.0	10.3
11UPR05_47	228	2.07	3.783	0.098	0.2635	0.0063	0.61658	1588.0	21.0	1506.0	32.0	1692.0	38.0	1692.0	38.0	11.0
11UPR05_48	367	1.016	0.733	0.010	0.0877	0.0011	0.42295	557.8	6.1	542.1	6.4	611.0	32.0	542.1	6.4	2.8
11UPR05_49	552	1.59	0.540	0.009	0.0699	0.0008	0.52449	438.6	6.2	435.7	4.9	463.0	33.0	435.7	4.9	0.7
11UPR05_50	118.3	1.434	5.497	0.057	0.3374	0.0033	0.43786	1899.5	9.0	1874.0	16.0	1933.0	19.0	1933.0	19.0	3.1
11UPR05_51	281.9	3.17	2.387	0.046	0.1938	0.0030	0.59147	1237.0	14.0	1143.0	17.0	1414.0	29.0	1143.0	17.0	7.6
11UPR05_52	348.1	2.144	9.565	0.068	0.4406	0.0040	0.6431	2394.4	6.8	2353.0	18.0	2435.0	12.0	2435.0	12.0	3.4
11UPR05_53	52.44	0.781	0.084	0.017	0.0121	0.0011	0.095765	81.0	16.0	77.8	7.3	210.0	400.0	77.8	7.3	4.0
11UPR05_54	87.7	1.535	1.413	0.032	0.1471	0.0030	0.34401	894.0	13.0	884.0	17.0	903.0	53.0	884.0	17.0	1.1
11UPR05_55	415	3.199	4.512	0.032	0.3039	0.0024	0.56311	1732.8	5.9	1710.0	12.0	1755.0	12.0	1755.0	12.0	2.6
11UPR05_56	554	2.655	0.528	0.007	0.0677	0.0007	0.27701	430.0	4.3	422.5	4.2	476.0	33.0	422.5	4.2	1.7
11UPR05_57	297	2.307	2.043	0.019	0.1924	0.0018	0.45778	1130.6	6.5	1134.4	9.6	1123.0	20.0	1134.4	9.6	0.3
11UPR05_58	115.2	1.579	0.493	0.012	0.0640	0.0009	0.080302	406.3	8.3	399.8	5.6	453.0	64.0	399.8	5.6	1.6
11UPR05_59	1350	1.43	0.701	0.024	0.0730	0.0031	0.86056	542.0	14.0	454.0	19.0	921.0	41.0	454.0	19.0	16.2
11UPR05_60	521	1.746	0.115	0.004	0.0164	0.0003	0.23397	110.6	3.2	104.6	2.0	281.0	70.0	104.6	2.0	5.4
11UPR05_61	490	2.573	4.323	0.059	0.2850	0.0030	0.49684	1698.0	11.0	1616.0	15.0	1801.0	23.0	1801.0	23.0	10.3
11UPR05_62	168.2	2.523	1.741	0.023	0.1691	0.0020	0.40596	1023.4	8.6	1007.0	11.0	1066.0	31.0	1007.0	11.0	1.6
11UPR05_63	391.9	1.299	3.932	0.044	0.2831	0.0029	0.65946	1621.0	9.0	1607.0	14.0	1648.0	17.0	1648.0	17.0	2.5
11UPR05_64	381	2.659	1.912	0.018	0.1822	0.0018	0.32962	1084.7	6.4	1079.1	9.6	1105.0	22.0	1079.1	9.6	0.5
11UPR05_65	194.5	1	0.447	0.009	0.0601	0.0009	0.31816	374.4	6.2	375.9	5.3	364.0	51.0	375.9	5.3	0.4
11UPR05_66	199	2.254	0.631	0.012	0.0795	0.0010	0.3417	496.0	7.6	492.8	5.9	514.0	46.0	492.8	5.9	0.6
11UPR05_67	243	4.65	2.162	0.056	0.2004	0.0042	0.87663	1166.0	18.0	1177.0	22.0	1165.0	24.0	1177.0	22.0	0.9
11UPR05_68	235	3.68	2.112	0.026	0.1944	0.0025	0.4485	1154.6	8.6	1147.0	14.0	1163.0	27.0	1147.0	14.0	0.7
11UPR05_69	517	1.349	0.096	0.003	0.0146	0.0002	0.035175	93.0	2.5	93.2	1.5	129.0	66.0	93.2	1.5	0.2
11UPR05_70	82.5	2.318	2.670	0.041	0.2252	0.0031	0.34623	1320.0	12.0	1309.0	16.0	1339.0	34.0	1339.0	34.0	2.2
11UPR05_71	241.6	0.892	5.554	0.058	0.3258	0.0035	0.50233	1909.4	8.8	1818.0	17.0	1992.0	23.0	1992.0	23.0	8.7

11UPR05_72	367	2.4	1.695	0.018	0.1610	0.0023	0.54881	1006.2	7.0	962.0	13.0	1091.0	27.0	962.0	13.0	4.4
11UPR05_73	260	1.26	6.169	0.046	0.3590	0.0028	0.44961	2000.5	6.6	1979.0	14.0	2012.0	14.0	2012.0	14.0	1.6
11UPR05_74	424	1.78	0.513	0.008	0.0655	0.0006	0.27342	420.2	5.3	409.1	3.7	482.0	34.0	409.1	3.7	2.6
11UPR05_75	194	3.14	2.832	0.044	0.2214	0.0037	0.62115	1368.0	12.0	1289.0	19.0	1505.0	24.0	1505.0	24.0	14.4
11UPR05_76	481	1.669	0.205	0.004	0.0278	0.0004	0.23598	189.5	3.6	176.9	2.5	341.0	51.0	176.9	2.5	6.6
11UPR05_77	513	11.2	0.451	0.018	0.0581	0.0023	0.84027	380.0	12.0	364.0	14.0	466.0	48.0	364.0	14.0	4.2
11UPR05_77	269	3.708	1.954	0.030	0.1756	0.0028	0.54407	1099.0	10.0	1043.0	15.0	1185.0	29.0	1043.0	15.0	5.1
11UPR05_78	332	6.48	3.795	0.060	0.2753	0.0051	0.72665	1590.0	13.0	1567.0	26.0	1628.0	24.0	1628.0	24.0	3.7
11UPR05_79	215	2.235	3.187	0.043	0.2406	0.0038	0.60348	1455.0	10.0	1390.0	20.0	1548.0	31.0	1548.0	31.0	10.2
11UPR05_80	34.5	1.465	9.170	0.160	0.4303	0.0058	0.55588	2355.0	16.0	2306.0	26.0	2394.0	22.0	2394.0	22.0	3.7
11UPR05_81	117.4	2.62	3.360	0.041	0.2585	0.0026	0.52536	1494.6	9.6	1482.0	13.0	1498.0	23.0	1498.0	23.0	1.1
11UPR05_82	122.4	1.417	13.870	0.150	0.5365	0.0069	0.6691	2741.8	9.9	2772.0	28.0	2717.0	15.0	2717.0	15.0	2.0
11UPR05_83	261	2.003	0.490	0.010	0.0657	0.0010	0.41047	404.7	6.7	410.4	5.9	355.0	45.0	410.4	5.9	1.4
11UPR05_84	54.8	1.95	4.163	0.071	0.2917	0.0049	0.4751	1668.0	14.0	1653.0	24.0	1695.0	32.0	1695.0	32.0	2.5
11UPR05_85	114.7	1.589	3.981	0.045	0.2818	0.0026	0.26742	1629.9	9.1	1600.0	13.0	1640.0	24.0	1640.0	24.0	2.4
11UPR05_86	152	1.496	3.982	0.060	0.2837	0.0044	0.59109	1631.0	13.0	1609.0	22.0	1662.0	27.0	1662.0	27.0	3.2
11UPR05_87	478	4.91	2.114	0.046	0.1882	0.0032	0.68343	1153.0	15.0	1111.0	18.0	1219.0	29.0	1111.0	18.0	3.6
11UPR05_87	198	1.845	2.605	0.038	0.2222	0.0043	0.62029	1302.0	11.0	1293.0	23.0	1308.0	27.0	1308.0	27.0	1.1
11UPR05_88	420.2	1.481	3.149	0.049	0.2287	0.0036	0.81765	1444.0	12.0	1327.0	19.0	1606.0	25.0	1606.0	25.0	17.4
11UPR05_89	255	1.908	3.067	0.055	0.2319	0.0029	0.87377	1423.0	14.0	1344.0	15.0	1533.0	22.0	1533.0	22.0	12.3
11UPR05_90	520	2.557	2.075	0.025	0.1874	0.0024	0.64223	1141.2	8.6	1107.0	13.0	1189.0	22.0	1107.0	13.0	3.0
11UPR05_91	201.2	1.577	0.827	0.014	0.0990	0.0012	0.24832	611.3	7.7	608.5	7.2	637.0	41.0	608.5	7.2	0.5
11UPR05_92	887	6.4	1.559	0.033	0.0727	0.0017	0.41181	953.0	13.0	452.1	9.9	2407.0	38.0	DISC	DISC	52.6
11UPR05_93	165	2.779	2.863	0.058	0.2290	0.0034	0.64853	1371.0	15.0	1329.0	18.0	1455.0	25.0	1455.0	25.0	8.7
11UPR05_94	275	2.05	1.913	0.031	0.1781	0.0026	0.43353	1086.0	10.0	1056.0	14.0	1156.0	31.0	1056.0	14.0	2.8
11UPR05_95	184.4	3.91	1.577	0.027	0.1583	0.0030	0.60992	960.0	11.0	947.0	16.0	989.0	29.0	947.0	16.0	1.4
11UPR05_96	299	2.146	1.537	0.031	0.1259	0.0015	0.020545	944.0	12.0	764.6	8.6	1387.0	51.0	764.6	8.6	19.0
11UPR05_97	109.1	3.417	34.470	0.490	0.7316	0.0098	0.6529	3622.0	14.0	3538.0	37.0	3675.0	17.0	3675.0	17.0	3.7
11UPR05_98	112.5	1.619	2.495	0.031	0.2175	0.0024	0.42246	1270.0	9.1	1268.0	13.0	1267.0	27.0	1267.0	27.0	0.1
11UPR05_99	249	1.61	0.574	0.011	0.0750	0.0011	0.55029	460.2	7.0	465.9	6.8	459.0	35.0	465.9	6.8	1.2
11UPR05_100	169	1.389	4.615	0.067	0.2824	0.0044	0.75622	1755.0	12.0	1603.0	22.0	1945.0	21.0	1945.0	21.0	17.6
11UPR05_101	620	2.124	3.237	0.039	0.2491	0.0036	0.72543	1465.4	9.4	1436.0	19.0	1514.0	19.0	1514.0	19.0	5.2
11UPR05_102	180	2	4.251	0.069	0.2847	0.0059	0.69355	1682.0	13.0	1614.0	30.0	1754.0	29.0	1754.0	29.0	8.0
11UPR05_103	56.6	0.4827	13.070	0.180	0.5063	0.0061	0.49567	2684.0	13.0	2640.0	26.0	2712.0	18.0	2712.0	18.0	2.7

11UPR05_104	865	2.536	0.338	0.009	0.0421	0.0006	0.040248	295.1	6.9	266.0	3.9	514.0	62.0	266.0	3.9	9.9
11UPR05_105	333.1	2.881	2.791	0.034	0.2267	0.0022	0.65894	1352.5	9.0	1317.0	11.0	1396.0	18.0	1396.0	18.0	5.7
11UPR05_106	142.7	1.78	0.714	0.015	0.0838	0.0016	0.35835	548.0	9.2	518.6	9.2	662.0	48.0	518.6	9.2	5.4
11UPR05_107	92	1.626	3.076	0.071	0.2263	0.0049	0.30538	1425.0	18.0	1315.0	26.0	1627.0	42.0	1627.0	42.0	19.2
11UPR05_107	49.26	1.213	3.835	0.078	0.2758	0.0074	0.32878	1603.0	17.0	1569.0	38.0	1655.0	56.0	1655.0	56.0	5.2
11UPR05_108	106.7	1.794	2.193	0.037	0.2005	0.0022	0.39384	1180.0	11.0	1178.0	12.0	1156.0	32.0	1178.0	12.0	0.2
11UPR05_109	111.5	1.353	3.972	0.052	0.2906	0.0035	0.25361	1627.0	10.0	1644.0	17.0	1603.0	29.0	1603.0	29.0	2.6
11UPR05_110	330.4	1.686	4.277	0.042	0.3055	0.0024	0.7209	1688.4	8.0	1719.0	12.0	1651.0	14.0	1651.0	14.0	4.1
11UPR05_111	100.7	0.825	1.639	0.027	0.1627	0.0025	0.37815	984.0	10.0	971.0	14.0	1016.0	37.0	971.0	14.0	1.3
11UPR05_112	25.07	0.993	1.799	0.086	0.1711	0.0048	0.086277	1050.0	29.0	1018.0	26.0	1069.0	95.0	1018.0	26.0	3.0
11UPR05_113	74.3	1.181	3.394	0.066	0.2665	0.0047	0.58701	1504.0	15.0	1522.0	24.0	1480.0	33.0	1480.0	33.0	2.8
11UPR05_114	47.1	0.95	0.894	0.022	0.1048	0.0022	0.045523	649.0	12.0	642.0	13.0	658.0	72.0	642.0	13.0	1.1
11UPR05_115	34.3	0.745	1.788	0.040	0.1693	0.0034	0.34224	1041.0	15.0	1008.0	19.0	1128.0	44.0	1008.0	19.0	3.2
11UPR05_116	213.4	2.012	9.730	0.200	0.4158	0.0083	0.78875	2408.0	19.0	2240.0	38.0	2539.0	23.0	2539.0	23.0	11.8
11UPR05_117	221	2.53	0.537	0.016	0.0694	0.0025	0.50579	436.0	10.0	432.0	15.0	434.0	79.0	432.0	15.0	0.9
11UPR05_118	107.9	1.812	0.280	0.012	0.0371	0.0010	0.25149	249.9	9.2	234.9	6.3	374.0	98.0	234.9	6.3	6.0
11UPR05_119	404	45.7	5.420	0.130	0.3276	0.0046	0.51301	1888.0	21.0	1826.0	22.0	1950.0	38.0	1950.0	38.0	6.4
11UPR06_1	467	3.46	10.660	0.370	0.3800	0.0120	0.94197	2488.0	33.0	2078.0	57.0	2851.0	14.0	2851.0	14.0	27.1
11UPR06_2	76.4	0.922	2.174	0.032	0.2012	0.0027	0.4941	1172.0	10.0	1183.0	15.0	1174.0	17.0	1183.0	15.0	0.9
11UPR06_3	166	2.81	4.474	0.062	0.3011	0.0044	0.83958	1727.0	11.0	1696.0	22.0	1780.0	12.0	1780.0	12.0	4.7
11UPR06_4	97.8	0.707	0.861	0.018	0.1016	0.0016	0.20783	631.0	10.0	623.8	9.1	662.0	33.0	623.8	9.1	1.1
11UPR06_5	331	1.631	1.693	0.032	0.1571	0.0029	0.86563	1005.0	12.0	940.0	16.0	1143.0	12.0	940.0	16.0	6.5
11UPR06_6	60.4	1.258	6.124	0.087	0.3481	0.0054	0.69198	1992.0	12.0	1925.0	26.0	2064.0	13.0	2064.0	13.0	6.7
11UPR06_7	770	1.97	3.607	0.064	0.2564	0.0050	0.92522	1549.0	14.0	1471.0	26.0	1666.4	8.4	1666.4	8.4	11.7
11UPR06_8	234.5	1.082	1.556	0.039	0.1470	0.0039	0.61868	956.0	15.0	884.0	22.0	1117.0	26.0	884.0	22.0	7.5
11UPR06_9	83.5	1.98	1.892	0.028	0.1790	0.0021	0.56455	1080.1	9.8	1061.0	11.0	1107.0	16.0	1061.0	11.0	1.8
11UPR06_10	78.8	0.941	3.893	0.067	0.2883	0.0053	0.73724	1611.0	14.0	1632.0	27.0	1594.0	17.0	1594.0	17.0	2.4
11UPR06_11	298	2.85	1.814	0.018	0.1791	0.0013	0.54837	1050.2	6.6	1062.2	7.1	1028.0	12.0	1062.2	7.1	1.1
11UPR06_12	67.2	1.31	3.576	0.046	0.2799	0.0046	0.58047	1545.0	10.0	1590.0	23.0	1509.0	19.0	1509.0	19.0	5.4
11UPR06_13	170.1	1.39	0.919	0.013	0.1071	0.0010	0.37278	662.4	6.7	655.9	5.8	674.0	17.0	655.9	5.8	1.0
11UPR06_14	65.7	1.336	3.388	0.046	0.2630	0.0032	0.62191	1503.0	11.0	1505.0	16.0	1503.0	11.0	1503.0	11.0	0.1
11UPR06_15	339	1.562	0.097	0.002	0.0147	0.0002	0.072459	93.8	1.9	93.9	1.2	156.0	22.0	93.9	1.2	0.1

11UPR06_16	247.4	1.641	2.824	0.027	0.2409	0.0021	0.66254	1362.6	7.0	1391.0	11.0	1315.4	7.6	1315.4	7.6	5.7
11UPR06_17	384	1.483	0.101	0.003	0.0153	0.0003	0.055403	97.8	2.7	98.0	2.0	209.0	42.0	98.0	2.0	0.2
11UPR06_18	633	2.91	2.848	0.029	0.2321	0.0024	0.81663	1367.6	7.8	1345.0	13.0	1412.4	7.3	1412.4	7.3	4.8
11UPR06_19	147.9	3.07	0.502	0.010	0.0659	0.0009	0.22424	412.7	6.6	411.2	5.1	424.0	24.0	411.2	5.1	0.4
11UPR06_20	230	1.2	4.251	0.052	0.2990	0.0032	0.72306	1683.0	10.0	1686.0	16.0	1676.8	9.1	1676.8	9.1	0.5
11UPR06_21	25.5	2.95	0.174	0.018	0.0194	0.0008	0.1468	161.0	15.0	123.7	4.8	920.0	110.0	123.7	4.8	23.2
11UPR06_22	75.5	3.91	11.320	0.130	0.4700	0.0045	0.73875	2549.0	11.0	2483.0	20.0	2608.1	7.6	2608.1	7.6	4.8
11UPR06_23	104	1.38	4.203	0.042	0.2968	0.0030	0.51894	1673.9	8.2	1675.0	15.0	1676.0	11.0	1676.0	11.0	0.1
11UPR06_24	135.4	0.56	0.476	0.010	0.0635	0.0006	0.15377	395.0	6.5	396.6	3.6	399.0	29.0	396.6	3.6	0.4
11UPR06_25	223	1.276	3.130	0.029	0.2525	0.0024	0.72333	1440.5	7.0	1451.0	12.0	1421.9	7.0	1421.9	7.0	2.0
11UPR06_26	14.5	0.801	0.757	0.036	0.0724	0.0027	0.41298	573.0	20.0	450.0	16.0	1144.0	54.0	450.0	16.0	21.5
11UPR06_27	148.6	1	3.220	0.029	0.2544	0.0021	0.47	1461.4	7.0	1461.0	11.0	1464.3	8.3	1464.3	8.3	0.2
11UPR06_28	163.3	1.183	11.380	0.100	0.4719	0.0037	0.70641	2555.0	8.4	2491.0	16.0	2605.8	6.5	2605.8	6.5	4.4
11UPR06_29	256	3.676	1.637	0.022	0.1633	0.0013	0.49652	983.8	8.4	974.8	7.4	1008.0	15.0	974.8	7.4	0.9
11UPR06_30	475	1.24	0.094	0.002	0.0139	0.0002	0.29016	90.8	2.1	88.8	1.4	211.0	29.0	88.8	1.4	2.2
11UPR06_31	301	1.659	2.021	0.043	0.1810	0.0025	0.39032	1121.0	14.0	1072.0	13.0	1250.0	36.0	1072.0	13.0	4.4
11UPR06_32	373	1.048	0.097	0.003	0.0145	0.0003	0.2673	93.5	3.0	92.8	1.6	281.0	46.0	92.8	1.6	0.7
11UPR06_33	92.2	1.06	1.821	0.028	0.1799	0.0021	0.36397	1052.0	10.0	1067.0	11.0	1022.0	19.0	1067.0	11.0	1.4
11UPR06_34	622	1.962	3.462	0.078	0.2459	0.0047	0.88626	1518.0	18.0	1417.0	24.0	1654.0	13.0	1654.0	13.0	14.3
11UPR06_35	76.7	2.429	2.009	0.031	0.1913	0.0019	0.32112	1117.0	10.0	1128.0	10.0	1106.0	19.0	1128.0	10.0	1.0
11UPR06_36	54.3	1.956	2.070	0.041	0.1929	0.0034	0.53128	1137.0	14.0	1139.0	18.0	1115.0	23.0	1139.0	18.0	0.2
11UPR06_37	110.1	1.127	1.972	0.023	0.1819	0.0020	0.35302	1106.5	7.7	1077.0	11.0	1152.0	18.0	1077.0	11.0	2.7
11UPR06_38	123.9	1.69	4.534	0.032	0.3171	0.0022	0.47845	1737.7	5.9	1775.0	11.0	1699.8	8.9	1699.8	8.9	4.4
11UPR06_39	382	1.072	0.097	0.003	0.0146	0.0002	0.027413	93.9	2.7	93.5	1.1	161.0	32.0	93.5	1.1	0.4
11UPR06_40	750	4.79	1.005	0.031	0.0758	0.0025	0.92419	705.0	16.0	471.0	15.0	1543.0	13.0	DISC	DISC	33.2
11UPR06_41	606	4.05	0.428	0.020	0.0541	0.0029	0.93759	360.0	14.0	339.0	18.0	497.0	23.0	339.0	18.0	5.8
11UPR06_42	112.8	0.827	0.688	0.011	0.0865	0.0010	0.21759	532.9	6.8	534.8	6.2	526.0	22.0	534.8	6.2	0.4
11UPR06_43	226	1.118	1.250	0.190	0.1026	0.0024	0.9698	756.0	64.0	630.0	14.0	1040.0	170.0	630.0	14.0	16.7
11UPR06_44	182	2.42	4.441	0.044	0.3089	0.0027	0.6215	1719.6	8.3	1735.0	14.0	1706.0	8.3	1706.0	8.3	1.7
11UPR06_45	123	1.336	2.424	0.025	0.2133	0.0020	0.51237	1250.2	7.3	1246.0	11.0	1246.0	11.0	1246.0	11.0	0.0
11UPR06_46	180	0.486	0.367	0.007	0.0504	0.0007	0.221	317.2	4.9	317.1	4.1	330.0	30.0	317.1	4.1	0.0
11UPR06_47	195.6	1.965	0.955	0.014	0.1127	0.0012	0.49392	680.5	7.0	688.5	6.8	667.0	16.0	688.5	6.8	1.2
11UPR06_48	139.7	2.423	4.872	0.051	0.3260	0.0032	0.75543	1796.7	8.8	1819.0	16.0	1771.0	10.0	1771.0	10.0	2.7
11UPR06_49	173	1.228	0.543	0.021	0.0654	0.0010	0.61983	439.0	14.0	408.0	5.9	579.0	60.0	408.0	5.9	7.1

11UPR06_50	508	1.36	0.168	0.005	0.0248	0.0004	0.85869	157.2	4.2	157.8	2.8	216.0	25.0	157.8	2.8	0.4
11UPR06_51	112.7	1.484	4.731	0.043	0.3200	0.0025	0.54453	1772.2	7.6	1791.0	12.0	1753.9	8.1	1753.9	8.1	2.1
11UPR06_52	46.7	2.33	0.733	0.019	0.0923	0.0014	0.028009	557.0	11.0	568.8	8.5	512.0	40.0	568.8	8.5	2.1
11UPR06_53	146	2.628	4.365	0.031	0.3039	0.0025	0.47269	1705.4	5.9	1711.0	12.0	1703.4	9.4	1703.4	9.4	0.4
11UPR06_54	571	1.534	1.998	0.026	0.1862	0.0027	0.77627	1114.4	8.6	1101.0	14.0	1133.4	9.9	1101.0	14.0	1.2
11UPR06_55	1030	2.07	0.082	0.006	0.0126	0.0007	0.89645	79.7	5.4	80.9	4.5	140.0	28.0	80.9	4.5	1.5
11UPR06_56	55.8	1.064	0.867	0.087	0.0576	0.0016	0.68265	622.0	45.0	360.8	9.8	1810.0	140.0	DISC	DISC	42.0
11UPR06_57	20.8	2.27	1.978	0.056	0.1873	0.0035	0.28663	1114.0	19.0	1106.0	19.0	1136.0	32.0	1106.0	19.0	0.7
11UPR06_58	111.4	1.76	1.916	0.034	0.1830	0.0019	0.54125	1085.0	12.0	1083.0	10.0	1086.0	20.0	1083.0	10.0	0.2
11UPR06_59	123.4	0.976	4.210	0.039	0.2990	0.0033	0.74941	1675.4	7.7	1688.0	16.0	1659.7	8.3	1659.7	8.3	1.7
11UPR06_60	31	1.402	2.244	0.039	0.2014	0.0031	0.46012	1193.0	12.0	1182.0	16.0	1213.0	15.0	1182.0	16.0	0.9
11UPR06_61	124.5	1.448	1.502	0.021	0.1565	0.0016	0.59483	931.6	8.3	937.0	8.6	937.0	14.0	937.0	8.6	0.6
11UPR06_62	103.7	0.609	4.584	0.042	0.3061	0.0030	0.52657	1745.8	7.7	1721.0	15.0	1786.0	10.0	1786.0	10.0	3.6
11UPR06_63	221	0.581	0.775	0.012	0.0931	0.0008	0.4217	582.4	6.7	573.9	4.4	615.0	18.0	573.9	4.4	1.5
11UPR06_64	133.2	0.88	5.106	0.049	0.3356	0.0031	0.54877	1836.6	8.1	1865.0	15.0	1811.0	11.0	1811.0	11.0	3.0
11UPR06_65	38.4	1.454	1.770	0.036	0.1728	0.0027	0.30875	1033.0	13.0	1027.0	15.0	1030.0	32.0	1027.0	15.0	0.6
11UPR06_66	131.6	0.77	4.098	0.039	0.2925	0.0028	0.53706	1654.5	7.9	1654.0	14.0	1660.6	9.4	1660.6	9.4	0.4
11UPR06_67	90.8	0.656	14.050	0.170	0.5436	0.0075	0.69353	2752.0	12.0	2797.0	31.0	2722.0	11.0	2722.0	11.0	2.8
11UPR06_68	45.2	1.79	12.670	0.120	0.4950	0.0057	0.53482	2655.9	9.5	2595.0	25.0	2697.1	9.6	2697.1	9.6	3.8
11UPR06_69	122	1.9	14.090	0.220	0.5405	0.0055	0.69727	2754.0	15.0	2785.0	23.0	2743.0	14.0	2743.0	14.0	1.5
11UPR06_70	314	0.984	0.097	0.003	0.0147	0.0003	0.36609	93.5	2.5	94.2	1.8	172.0	26.0	94.2	1.8	0.7
11UPR06_71	195	2.008	3.115	0.026	0.2499	0.0018	0.62489	1436.1	6.5	1438.0	9.2	1436.0	7.4	1436.0	7.4	0.1
11UPR06_72	93.7	1.696	2.071	0.057	0.1849	0.0041	0.94735	1137.0	18.0	1093.0	22.0	1224.0	19.0	1093.0	22.0	3.9
11UPR06_73	532	1.481	12.250	0.110	0.4936	0.0039	0.7941	2623.0	8.7	2586.0	17.0	2651.3	6.7	2651.3	6.7	2.5
11UPR06_74	382	1.8	0.109	0.003	0.0163	0.0003	0.29883	104.7	2.7	103.9	1.8	205.0	41.0	103.9	1.8	0.8
11UPR06_75	311	0.898	0.128	0.005	0.0155	0.0003	0.38809	122.2	4.5	99.4	1.7	641.0	54.0	99.4	1.7	18.7
11UPR06_76	75	1.084	4.276	0.048	0.3043	0.0043	0.48457	1689.2	9.1	1712.0	21.0	1655.0	17.0	1655.0	17.0	3.4
11UPR06_77	106	1.526	8.010	0.100	0.4220	0.0052	0.77696	2231.0	12.0	2269.0	24.0	2198.0	10.0	2198.0	10.0	3.2
11UPR06_78	69	1.711	7.350	0.160	0.3942	0.0067	0.64293	2153.0	19.0	2141.0	31.0	2162.0	23.0	2162.0	23.0	1.0
11UPR06_79	108.6	0.709	0.538	0.009	0.0702	0.0008	0.018753	436.9	6.0	437.1	4.7	449.0	20.0	437.1	4.7	0.0
11UPR06_80	119	0.933	0.100	0.004	0.0141	0.0003	0.13023	96.4	4.0	90.5	2.0	320.0	52.0	90.5	2.0	6.1
11UPR06_81	248.3	1.09	3.501	0.070	0.2471	0.0048	0.85613	1526.0	16.0	1423.0	25.0	1672.0	16.0	1672.0	16.0	14.9
11UPR06_82	69.1	0.804	4.034	0.048	0.2973	0.0031	0.44262	1641.5	9.4	1677.0	15.0	1606.0	13.0	1606.0	13.0	4.4
11UPR06_83	320	2.4	11.230	0.800	0.4270	0.0270	0.99151	2507.0	75.0	2270.0	130.0	2755.0	14.0	2755.0	14.0	17.6

11UPR06_84	293	0.658	0.379	0.006	0.0528	0.0008	0.14065	325.8	4.7	331.6	4.9	305.0	26.0	331.6	4.9	1.8
11UPR06_85	181.5	0.593	4.038	0.050	0.2815	0.0028	0.29833	1643.0	10.0	1599.0	14.0	1705.0	18.0	1705.0	18.0	6.2
11UPR06_86	662	3.01	4.442	0.042	0.3023	0.0032	0.88416	1719.5	7.8	1702.0	16.0	1739.9	5.3	1739.9	5.3	2.2
11UPR06_87	236	0.948	1.928	0.018	0.1866	0.0017	0.49782	1090.4	6.2	1102.6	9.4	1066.0	11.0	1102.6	9.4	1.1
11UPR06_88	308	1.465	2.457	0.020	0.2148	0.0025	0.60569	1259.1	5.9	1254.0	13.0	1268.1	9.7	1268.1	9.7	1.1
11UPR06_89	50.6	1.7	0.730	0.020	0.0909	0.0020	0.35459	555.0	12.0	561.0	12.0	547.0	30.0	561.0	12.0	1.1
11UPR06_90	167	0.906	0.101	0.004	0.0148	0.0002	0.02919	97.8	3.4	94.5	1.4	231.0	33.0	94.5	1.4	3.4
11UPR06_91	117.6	1.313	3.116	0.039	0.2449	0.0023	0.44079	1437.0	9.6	1412.0	12.0	1460.0	13.0	1460.0	13.0	3.3
11UPR06_92	47.8	0.745	2.729	0.036	0.2312	0.0030	0.39822	1338.2	9.7	1340.0	16.0	1327.0	17.0	1327.0	17.0	1.0
11UPR06_93	166	3.17	0.575	0.019	0.0744	0.0017	0.78164	460.0	12.0	463.0	10.0	463.0	32.0	463.0	10.0	0.7
11UPR06_94	207.5	1.042	3.422	0.048	0.2645	0.0034	0.85073	1508.0	11.0	1512.0	17.0	1483.0	16.0	1483.0	16.0	2.0
11UPR06_95	272	1.707	4.362	0.039	0.3014	0.0030	0.81895	1704.6	7.4	1698.0	15.0	1711.8	6.0	1711.8	6.0	0.8
11UPR06_96	108.3	1.297	1.320	0.060	0.0874	0.0034	0.92435	847.0	27.0	539.0	20.0	1769.0	22.0	DISC	DISC	36.4
11UPR06_97	79.8	2.44	0.592	0.013	0.0741	0.0011	0.31347	471.5	8.4	460.8	6.8	478.0	23.0	460.8	6.8	2.3
11UPR06_98	99.1	0.608	2.872	0.045	0.2348	0.0037	0.74705	1377.0	12.0	1359.0	19.0	1390.0	14.0	1390.0	14.0	2.2
11UPR06_99	231	2.54	4.054	0.024	0.2800	0.0020	0.54316	1644.9	4.8	1591.0	10.0	1698.8	7.9	1698.8	7.9	6.3
11UPR06_100	63.5	1.01	0.867	0.019	0.1061	0.0015	0.21786	633.0	11.0	650.0	8.5	570.0	30.0	650.0	8.5	2.7
11UPR06_101	122.1	0.6542	1.850	0.023	0.1781	0.0018	0.32463	1064.0	8.4	1056.6	9.9	1060.0	17.0	1056.6	9.9	0.7
11UPR06_102	55	0.856	0.627	0.019	0.0795	0.0013	0.20135	493.0	12.0	493.2	7.9	518.0	35.0	493.2	7.9	0.0
11UPR06_103	322	1.88	1.810	0.012	0.1792	0.0012	0.27646	1048.7	4.5	1062.4	6.7	1022.8	9.2	1062.4	6.7	1.3
11UPR06_104	7.77	2.5	1.820	0.100	0.1577	0.0064	0.18913	1048.0	37.0	943.0	36.0	1327.0	72.0	943.0	36.0	10.0
11UPR06_105	69.4	1.299	1.819	0.034	0.1732	0.0041	0.26563	1051.0	12.0	1029.0	23.0	1057.0	22.0	1029.0	23.0	2.1
11UPR06_106	84.1	0.6683	1.828	0.027	0.1810	0.0018	0.2417	1054.8	9.6	1072.4	9.8	1020.0	17.0	1072.4	9.8	1.7
11UPR06_107	141.9	1.281	0.810	0.017	0.0987	0.0016	0.46364	601.9	9.3	606.4	9.4	581.0	24.0	606.4	9.4	0.7
11UPR06_108	291	2.286	1.779	0.019	0.1745	0.0020	0.60722	1038.2	7.1	1037.0	11.0	1034.0	12.0	1037.0	11.0	0.1
11UPR06_109	54.1	1.415	1.911	0.035	0.1843	0.0030	0.53566	1085.0	13.0	1092.0	17.0	1069.0	22.0	1092.0	17.0	0.6
11UPR06_110	116	1.146	0.134	0.018	0.0154	0.0005	0.38416	125.0	15.0	98.6	3.1	840.0	230.0	98.6	3.1	21.1
11UPR06_111	1190	1.88	0.093	0.007	0.0141	0.0007	0.93352	90.3	6.2	89.9	4.6	245.0	29.0	89.9	4.6	0.4
11UPR06_113	44.3	0.864	1.636	0.039	0.1569	0.0029	0.4594	984.0	15.0	939.0	16.0	1067.0	29.0	939.0	16.0	4.6
11UPR06_114	173	1.141	4.475	0.044	0.3075	0.0029	0.58215	1725.8	8.0	1728.0	14.0	1730.1	7.8	1730.1	7.8	0.1
11UPR06_115	248.8	0.907	0.592	0.017	0.0704	0.0008	0.49988	471.0	10.0	438.8	4.7	621.0	44.0	438.8	4.7	6.8
11UPR06_116	76.1	2.069	1.984	0.036	0.1861	0.0035	0.60383	1112.0	13.0	1100.0	19.0	1129.0	21.0	1100.0	19.0	1.1
11UPR06_117	137	0.931	2.708	0.031	0.2304	0.0027	0.045823	1331.7	8.7	1336.0	14.0	1328.0	22.0	1328.0	22.0	0.6
11UPR06_118	103.2	0.5427	0.855	0.016	0.1027	0.0013	0.33597	627.6	9.1	629.8	7.8	605.0	23.0	629.8	7.8	0.4
11UPR06_119	75	1.07	3.771	0.042	0.2775	0.0031	0.40264	1585.9	9.0	1578.0	16.0	1579.0	12.0	1579.0	12.0	0.1

11UPR06_120	168.3	1.86	0.857	0.011	0.1020	0.0011	0.22789	628.9	5.8	625.8	6.7	629.0	20.0	625.8	6.7	0.5
11UPR06_121	242	1.878	3.405	0.031	0.2672	0.0021	0.50097	1505.2	7.1	1526.0	11.0	1473.0	9.1	1473.0	9.1	3.6
11UPR07_1	190.4	1.027	0.103	0.004	0.0148	0.0003	0.047768	99.7	3.5	94.4	1.6	301.0	44.0	94.4	1.6	5.3
11UPR07_2	29.4	0.598	3.646	0.068	0.2615	0.0056	0.45118	1560.0	15.0	1497.0	29.0	1643.0	23.0	1643.0	23.0	8.9
11UPR07_3	53.5	0.625	1.940	0.042	0.1813	0.0019	0.24369	1093.0	14.0	1074.0	10.0	1166.0	39.0	1074.0	10.0	1.7
11UPR07_4	22.9	2.009	0.754	0.025	0.0909	0.0021	0.17133	570.0	15.0	561.0	13.0	593.0	38.0	561.0	13.0	1.6
11UPR07_5	77.3	0.973	0.588	0.014	0.0740	0.0011	0.41917	470.7	8.5	460.1	6.6	505.0	35.0	460.1	6.6	2.3
11UPR07_6	30.8	1.005	1.741	0.033	0.1707	0.0025	0.32699	1026.0	13.0	1016.0	14.0	1016.0	18.0	1016.0	14.0	1.0
11UPR07_7	231	30.4	1.579	0.030	0.1615	0.0025	0.97209	957.0	14.0	965.0	14.0	950.0	11.0	965.0	14.0	0.8
11UPR07_8	231	1.864	1.737	0.018	0.1698	0.0015	0.59119	1022.1	6.6	1011.2	8.0	1057.0	13.0	1011.2	8.0	1.1
11UPR07_9	448	1.521	2.330	0.025	0.2056	0.0024	0.3346	1220.9	7.5	1208.0	13.0	1242.0	9.4	1242.0	9.4	2.7
11UPR07_10	98.8	1.553	0.114	0.006	0.0162	0.0005	0.016421	109.6	5.3	103.7	2.9	337.0	52.0	103.7	2.9	5.4
11UPR07_11	68.9	2.944	4.098	0.057	0.2985	0.0038	0.75134	1653.0	11.0	1683.0	19.0	1627.0	13.0	1627.0	13.0	3.4
11UPR07_12	221	2.331	4.680	0.200	0.3016	0.0045	0.77585	1765.0	37.0	1699.0	22.0	1846.0	52.0	1846.0	52.0	8.0
11UPR07_13	174	1.328	6.873	0.063	0.3756	0.0047	0.6212	2094.8	8.1	2055.0	22.0	2147.0	14.0	2147.0	14.0	4.3
11UPR07_14	857	1.195	0.523	0.013	0.0591	0.0019	0.89518	428.0	8.4	370.0	11.0	776.0	37.0	370.0	11.0	13.6
11UPR07_15	78.1	1.278	6.117	0.063	0.3501	0.0030	0.55413	1991.9	8.9	1935.0	14.0	2053.0	10.0	2053.0	10.0	5.7
11UPR07_16	56.2	1.311	14.530	0.290	0.5180	0.0120	0.52194	2791.0	22.0	2687.0	54.0	2841.0	24.0	2841.0	24.0	5.4
11UPR07_17	208	1.995	1.691	0.022	0.1646	0.0024	0.62483	1004.7	8.4	982.0	13.0	1042.0	12.0	982.0	13.0	2.3
11UPR07_18	116	0.93	3.085	0.053	0.2370	0.0038	0.78059	1428.0	13.0	1371.0	20.0	1508.0	11.0	1508.0	11.0	9.1
11UPR07_19	22.3	0.5959	1.742	0.055	0.1677	0.0029	0.4478	1021.0	20.0	999.0	16.0	1074.0	34.0	999.0	16.0	2.2
11UPR07_20	85.4	1.215	4.186	0.038	0.2970	0.0026	0.37465	1671.8	7.6	1676.0	13.0	1670.7	9.5	1670.7	9.5	0.3
11UPR07_21	34.55	0.484	1.907	0.035	0.1768	0.0028	0.0049015	1082.0	12.0	1049.0	15.0	1153.0	27.0	1049.0	15.0	3.0
11UPR07_22	248	3.56	2.250	0.150	0.1964	0.0095	0.94975	1187.0	49.0	1152.0	52.0	1264.0	35.0	1152.0	52.0	2.9
11UPR07_23	116	1.644	3.700	0.420	0.2532	0.0061	0.94821	1518.0	53.0	1454.0	31.0	1640.0	100.0	1640.0	100.0	11.3
11UPR07_24	111	1.294	1.481	0.036	0.1529	0.0026	0.76832	924.0	14.0	917.0	15.0	933.0	17.0	917.0	15.0	0.8
11UPR07_25	514	3.93	1.360	0.034	0.1321	0.0020	0.85504	870.0	15.0	800.0	12.0	1058.0	23.0	800.0	12.0	8.0
11UPR07_26	267.1	1.812	3.710	0.180	0.2644	0.0032	0.85336	1555.0	30.0	1512.0	16.0	1610.0	52.0	1610.0	52.0	6.1
11UPR07_27	161.9	1.287	14.520	0.100	0.5366	0.0047	0.7071	2784.0	6.5	2769.0	19.0	2792.2	6.1	2792.2	6.1	0.8
11UPR07_28	83.2	0.5998	2.779	0.050	0.2232	0.0047	0.79562	1348.0	14.0	1301.0	25.0	1426.0	14.0	1426.0	14.0	8.8
11UPR07_29	78.6	1.705	2.791	0.052	0.2326	0.0041	0.55589	1353.0	14.0	1348.0	22.0	1371.0	18.0	1371.0	18.0	1.7
11UPR07_30	164	0.695	0.535	0.011	0.0692	0.0010	0.46506	434.6	7.2	431.5	6.2	476.0	27.0	431.5	6.2	0.7

11UPR07_31	146.6	1.15	0.535	0.011	0.0699	0.0010	0.5139	434.5	7.0	435.6	6.3	427.0	27.0	435.6	6.3	0.3
11UPR07_32	120.3	1.26	1.825	0.023	0.1761	0.0019	0.50944	1053.9	8.4	1045.0	10.0	1077.0	13.0	1045.0	10.0	0.8
11UPR07_33	207.8	0.941	15.770	0.250	0.5738	0.0097	0.85115	2862.0	15.0	2922.0	40.0	2810.6	6.1	2810.6	6.1	4.0
11UPR07_34	152	1.78	0.430	0.007	0.0570	0.0007	0.24813	362.7	4.9	357.1	4.3	398.0	27.0	357.1	4.3	1.5
11UPR07_35	539	1.144	2.277	0.045	0.1664	0.0045	0.61486	1204.0	14.0	992.0	25.0	1588.0	31.0	992.0	25.0	17.6
11UPR07_36	85.9	1.605	3.786	0.054	0.2751	0.0032	0.59308	1589.0	11.0	1566.0	16.0	1627.0	14.0	1627.0	14.0	3.7
11UPR07_37	990	2.25	1.251	0.065	0.1100	0.0057	0.98442	816.0	30.0	671.0	33.0	1253.0	13.0	671.0	33.0	17.8
11UPR07_38	125.4	1.076	4.968	0.053	0.3208	0.0037	0.69866	1813.1	9.0	1793.0	18.0	1838.0	11.0	1838.0	11.0	2.4
11UPR07_39	863	6.7	3.100	0.053	0.2297	0.0039	0.9478	1431.0	13.0	1332.0	20.0	1580.1	5.2	1580.1	5.2	15.7
11UPR07_40	156.6	0.568	1.804	0.023	0.1770	0.0027	0.81577	1046.3	8.5	1050.0	15.0	1040.0	15.0	1050.0	15.0	0.4
11UPR07_41	238.2	3.9	0.601	0.029	0.0741	0.0027	0.87397	481.0	18.0	461.0	16.0	590.0	30.0	461.0	16.0	4.2
11UPR07_42	241	0.866	0.496	0.010	0.0654	0.0011	0.69628	408.8	6.5	409.0	6.6	414.0	17.0	409.0	6.6	0.0
11UPR07_43	90.3	1.775	0.865	0.027	0.0806	0.0021	0.83117	633.0	14.0	499.0	13.0	1185.0	21.0	499.0	13.0	21.2
11UPR07_44	371	2.69	4.613	0.040	0.3128	0.0031	0.92053	1751.2	7.4	1754.0	15.0	1748.2	8.2	1748.2	8.2	0.3
11UPR07_45	179.7	0.448	3.985	0.045	0.2867	0.0037	0.87948	1631.7	9.5	1625.0	19.0	1638.9	7.5	1638.9	7.5	0.8
11UPR07_46	78.8	0.676	0.430	0.011	0.0557	0.0008	0.051963	362.3	7.9	349.5	4.9	465.0	35.0	349.5	4.9	3.5
11UPR07_47	90.7	0.746	2.720	0.270	0.1837	0.0036	0.83049	1290.0	65.0	1087.0	19.0	1590.0	120.0	1087.0	19.0	15.7
11UPR07_48	259	1.921	3.163	0.023	0.2529	0.0020	0.58329	1448.7	5.5	1453.0	10.0	1447.5	7.9	1447.5	7.9	0.4
11UPR07_49	106.7	1.05	6.320	0.083	0.3652	0.0046	0.68552	2020.0	11.0	2006.0	22.0	2032.0	12.0	2032.0	12.0	1.3
11UPR07_50	107.8	2.37	13.170	0.110	0.5262	0.0037	0.61548	2693.2	8.1	2725.0	16.0	2669.0	9.0	2669.0	9.0	2.1
11UPR07_51	181	1.375	0.106	0.004	0.0140	0.0003	0.16207	102.3	3.9	89.4	2.0	464.0	63.0	89.4	2.0	12.6
11UPR07_52	266	1.264	2.640	0.019	0.2261	0.0016	0.402	1311.6	5.2	1313.9	8.4	1310.5	9.4	1310.5	9.4	0.3
11UPR07_53	460	2.91	3.886	0.074	0.2815	0.0045	0.86639	1609.0	15.0	1599.0	23.0	1638.0	12.0	1638.0	12.0	2.4
11UPR07_54	167.7	1.12	8.470	0.120	0.3567	0.0050	0.82564	2281.0	13.0	1970.0	25.0	2582.6	8.6	2582.6	8.6	23.7
11UPR07_55	251.4	1.687	3.890	0.230	0.2597	0.0039	0.78394	1592.0	43.0	1487.0	20.0	1735.0	77.0	1735.0	77.0	14.3
11UPR07_56	209	1.272	0.095	0.003	0.0146	0.0002	0.1174	92.3	3.0	93.2	1.5	204.0	35.0	93.2	1.5	1.0
11UPR07_57	46.8	0.418	14.470	0.170	0.5610	0.0083	0.7496	2780.0	11.0	2869.0	34.0	2723.7	9.8	2723.7	9.8	5.3
11UPR07_58	67.5	1.141	4.433	0.075	0.3074	0.0039	0.49248	1717.0	14.0	1730.0	20.0	1721.0	14.0	1721.0	14.0	0.5
11UPR07_59	116.5	0.972	2.104	0.023	0.1957	0.0024	0.56466	1149.6	7.4	1152.0	13.0	1149.0	11.0	1152.0	13.0	0.2
11UPR07_60	186	4.57	1.090	0.040	0.1108	0.0036	0.91318	745.0	19.0	677.0	21.0	976.0	18.0	677.0	21.0	9.1
11UPR07_61	40.6	1.178	2.702	0.070	0.2255	0.0054	0.46506	1331.0	20.0	1310.0	29.0	1385.0	27.0	1385.0	27.0	5.4
11UPR07_62	172.2	1.419	3.488	0.065	0.2494	0.0052	0.86866	1523.0	15.0	1435.0	27.0	1646.0	11.0	1646.0	11.0	12.8
11UPR07_63	669	1.4	0.504	0.005	0.0626	0.0008	0.41856	414.5	3.7	391.5	4.6	547.0	24.0	391.5	4.6	5.5
11UPR07_64	758	2.25	0.664	0.080	0.0593	0.0014	0.8818	510.0	46.0	371.2	8.4	1120.0	170.0	371.2	8.4	27.2
11UPR07_65	51.4	1.168	3.465	0.053	0.2719	0.0033	0.66553	1520.0	12.0	1550.0	17.0	1491.0	13.0	1491.0	13.0	4.0

11UPR07_66	312	0.988	2.660	0.110	0.1897	0.0081	0.96418	1313.0	35.0	1117.0	44.0	1671.0	12.0	1117.0	44.0	14.9
11UPR07_67	482	1.014	2.094	0.018	0.1955	0.0016	0.71298	1147.4	5.7	1150.8	8.6	1138.8	7.1	1150.8	8.6	0.3
11UPR07_68	196	1.96	0.543	0.010	0.0704	0.0009	0.09829 1	440.1	6.4	438.3	5.4	446.0	29.0	438.3	5.4	0.4
11UPR07_69	49.7	0.969	3.431	0.053	0.2710	0.0030	0.52613	1511.0	12.0	1545.0	15.0	1475.0	17.0	1475.0	17.0	4.7
11UPR07_70	560	1.19	0.109	0.003	0.0152	0.0003	0.92852	104.9	3.0	97.5	2.0	283.0	32.0	97.5	2.0	7.1
11UPR07_71	109.4	1.202	12.720	0.140	0.5056	0.0066	0.5721	2658.0	10.0	2637.0	28.0	2686.4	9.7	2686.4	9.7	1.8
11UPR07_72	409.4	2.74	2.422	0.066	0.1716	0.0058	0.83197	1247.0	20.0	1020.0	32.0	1684.0	22.0	1020.0	32.0	18.2
11UPR07_73	36.4	1.549	2.085	0.047	0.1820	0.0025	0.19353	1143.0	15.0	1078.0	14.0	1281.0	30.0	1078.0	14.0	5.7
11UPR07_74	161	0.792	1.722	0.031	0.1630	0.0025	0.93711	1016.0	12.0	973.0	14.0	1114.0	14.0	973.0	14.0	4.2
11UPR07_75	282	1.583	0.744	0.009	0.0907	0.0009	0.33857	564.7	4.9	559.8	5.2	587.0	15.0	559.8	5.2	0.9
11UPR07_76	181.5	1.611	3.969	0.042	0.2882	0.0032	0.79187	1629.6	8.5	1632.0	16.0	1625.5	8.0	1625.5	8.0	0.4
11UPR07_77	44.1	0.655	3.945	0.061	0.2908	0.0040	0.35628	1622.0	12.0	1645.0	20.0	1626.0	18.0	1626.0	18.0	1.2
11UPR07_78	309	9.3	2.150	0.100	0.1785	0.0034	0.228	1155.0	31.0	1058.0	18.0	1305.0	67.0	1058.0	18.0	8.4
11UPR07_79	686	3	2.841	0.076	0.1971	0.0053	0.89731	1369.0	21.0	1163.0	29.0	1696.0	14.0	1163.0	29.0	15.0
11UPR07_80	249	0.983	2.522	0.029	0.2145	0.0026	0.74232	1278.8	8.3	1252.0	14.0	1314.3	9.0	1314.3	9.0	4.7
11UPR07_81	161	1.396	4.473	0.064	0.3080	0.0046	0.83733	1725.0	12.0	1730.0	23.0	1716.6	9.5	1716.6	9.5	0.8
11UPR07_82	164	2.2	3.725	0.054	0.2756	0.0043	0.69239	1575.0	12.0	1568.0	22.0	1597.0	13.0	1597.0	13.0	1.8
11UPR07_83	410	4.38	1.066	0.090	0.1018	0.0031	0.91122	728.0	43.0	624.0	18.0	1000.0	110.0	624.0	18.0	14.3
11UPR07_84	311.4	2.1	5.451	0.067	0.3294	0.0051	0.74316	1892.0	11.0	1835.0	25.0	1975.0	12.0	1975.0	12.0	7.1
11UPR07_85	330	0.252	0.301	0.006	0.0421	0.0005	0.1049	267.4	4.4	266.1	2.8	289.0	22.0	266.1	2.8	0.5
11UPR07_86	511	1.66	4.019	0.088	0.2433	0.0054	0.94648	1639.0	19.0	1412.0	26.0	1945.0	11.0	1945.0	11.0	27.4
11UPR07_87	129.4	1.143	2.218	0.032	0.1959	0.0025	0.80513	1186.0	10.0	1153.0	14.0	1259.0	14.0	1153.0	14.0	2.8
11UPR07_88	54.9	0.829	2.479	0.052	0.2124	0.0037	0.32306	1264.0	15.0	1241.0	20.0	1328.0	31.0	1328.0	31.0	6.6
11UPR07_89	183	2.182	0.692	0.011	0.0855	0.0007	0.29325	533.8	6.5	529.1	4.3	556.0	21.0	529.1	4.3	0.9
11UPR07_90	238	2.001	3.364	0.043	0.2628	0.0039	0.73148	1495.3	9.8	1504.0	20.0	1490.8	9.7	1490.8	9.7	0.9
11UPR07_91	434	5.31	4.066	0.052	0.2921	0.0038	0.92781	1647.0	11.0	1651.0	19.0	1652.4	7.3	1652.4	7.3	0.1
11UPR07_92	114.8	1.879	3.258	0.046	0.2618	0.0034	0.65453	1470.0	11.0	1501.0	17.0	1437.0	12.0	1437.0	12.0	4.5
11UPR07_93	522	3.611	1.586	0.044	0.1503	0.0034	0.90261	962.0	17.0	902.0	19.0	1107.0	17.0	902.0	19.0	6.2
11UPR07_94	623	1.513	0.416	0.007	0.0521	0.0009	0.80667	353.8	5.0	327.3	5.7	531.0	17.0	327.3	5.7	7.5
11UPR07_95	285	3.065	4.591	0.051	0.3171	0.0033	0.74824	1747.0	9.4	1775.0	16.0	1710.1	9.5	1710.1	9.5	3.8
11UPR07_96	142	0.483	0.826	0.024	0.1000	0.0023	0.69029	610.0	13.0	614.0	13.0	654.0	31.0	614.0	13.0	0.7
11UPR07_97	31.5	0.621	3.800	0.110	0.2636	0.0049	0.38235	1595.0	23.0	1508.0	25.0	1740.0	36.0	1740.0	36.0	13.3
11UPR07_98	93.1	0.76	3.768	0.067	0.2715	0.0047	0.79427	1586.0	14.0	1547.0	24.0	1631.0	13.0	1631.0	13.0	5.2
11UPR07_99	414	1.647	4.555	0.036	0.3160	0.0025	0.92591	1740.7	6.6	1770.0	12.0	1708.8	7.0	1708.8	7.0	3.6
11UPR07_100	74.6	2.11	2.332	0.041	0.2041	0.0031	0.60426	1221.0	13.0	1197.0	16.0	1264.0	17.0	1197.0	16.0	2.0

11UPR07_101	242	3.68	15.520	0.180	0.5563	0.0046	0.73556	2849.0	11.0	2854.0	20.0	2858.0	8.5	2858.0	8.5	0.1
11UPR07_102	173	1.418	3.366	0.036	0.2626	0.0026	0.78066	1496.1	8.3	1503.0	13.0	1496.0	10.0	1496.0	10.0	0.5
11UPR07_103	136	0.912	9.500	0.360	0.3740	0.0150	0.98096	2379.0	34.0	2039.0	68.0	2699.6	6.9	2699.6	6.9	24.5
11UPR07_104	109	0.99	5.125	0.073	0.3344	0.0036	0.63321	1842.0	11.0	1859.0	18.0	1843.0	14.0	1843.0	14.0	0.9
11UPR07_105	184	1.177	2.078	0.047	0.1977	0.0043	0.8383	1140.0	16.0	1163.0	23.0	1103.0	15.0	1163.0	23.0	2.0
11UPR07_106	32.1	2.55	14.350	0.290	0.5430	0.0120	0.74449	2772.0	19.0	2796.0	48.0	2747.0	13.0	2747.0	13.0	1.8
11UPR07_107	174.6	0.982	1.918	0.021	0.1837	0.0017	0.55941	1087.7	7.1	1086.9	9.4	1107.0	11.0	1086.9	9.4	0.1
11UPR07_108	106.1	1.78	2.354	0.037	0.2093	0.0023	0.36019	1230.0	11.0	1225.0	12.0	1250.0	19.0	1250.0	19.0	2.0
11UPR07_109	114.7	1.583	4.437	0.064	0.3048	0.0045	0.66563	1719.0	12.0	1714.0	22.0	1730.0	12.0	1730.0	12.0	0.9
11UPR07_110	149.3	1.387	2.090	0.031	0.1908	0.0017	0.29261	1145.0	10.0	1125.4	9.3	1195.0	17.0	1125.4	9.3	1.7
11UPR07_111	43.1	1.217	1.881	0.036	0.1837	0.0028	0.32869	1074.0	13.0	1087.0	15.0	1061.0	23.0	1087.0	15.0	1.2
11UPR07_112	82	0.741	0.783	0.017	0.0950	0.0015	0.20031	587.9	9.6	586.1	8.6	597.0	34.0	586.1	8.6	0.3
11UPR07_113	395	0.848	0.518	0.008	0.0674	0.0008	0.59268	423.3	5.5	420.4	4.7	459.0	19.0	420.4	4.7	0.7
11UPR07_114	25.7	1	1.405	0.067	0.1456	0.0046	0.62563	883.0	29.0	875.0	26.0	911.0	46.0	875.0	26.0	0.9
11UPR07_115	55	0.959	17.880	0.150	0.5909	0.0049	0.61214	2982.8	8.1	2992.0	20.0	2979.8	7.8	2979.8	7.8	0.4
11UPR07_116	180	0.48	3.423	0.042	0.2689	0.0040	0.62685	1508.8	9.7	1535.0	21.0	1492.0	14.0	1492.0	14.0	2.9
11UPR07_117	47.34	1.86	4.600	0.099	0.3196	0.0054	0.68251	1750.0	18.0	1787.0	26.0	1720.0	19.0	1720.0	19.0	3.9
11UPR07_118	4.7	3.36	12.540	0.410	0.5040	0.0180	0.44951	2649.0	30.0	2624.0	78.0	2662.0	33.0	2662.0	33.0	1.4
11UPR07_119	706	2.89	2.071	0.027	0.1918	0.0028	0.78251	1138.8	8.8	1131.0	15.0	1155.0	13.0	1131.0	15.0	0.7
11UPR07_120	671	7.6	2.350	0.140	0.1924	0.0050	0.74589	1216.0	41.0	1139.0	25.0	1405.0	69.0	1139.0	25.0	6.3
Panthert_1	127.1	2.32	0.807	0.014	0.0970	0.0011	0.57271	600.4	8.0	596.8	6.6	625.0	30.0	596.8	6.6	0.6
Panthert_2	176	0.825	0.640	0.009	0.0812	0.0009	0.18785	502.3	5.8	503.1	5.6	496.0	30.0	503.1	5.6	0.2
Panthert_3	276	1.372	0.325	0.006	0.0455	0.0005	0.43718	285.5	4.3	286.9	3.1	269.0	34.0	286.9	3.1	0.5
Panthert_4	149.6	2.013	0.770	0.014	0.0903	0.0011	0.61204	579.2	7.8	557.4	6.7	653.0	31.0	557.4	6.7	3.8
Panthert_5	127.9	1.083	4.359	0.042	0.2981	0.0029	0.64968	1704.1	7.9	1682.0	14.0	1724.0	15.0	1724.0	15.0	2.4
Panthert_6	82.5	6.71	1.153	0.028	0.1103	0.0018	0.60605	784.0	13.0	674.0	11.0	1105.0	40.0	674.0	11.0	14.0
Panthert_7	88.3	2.29	14.780	0.150	0.5242	0.0057	0.65616	2800.3	9.9	2716.0	24.0	2867.0	13.0	2867.0	13.0	5.3
Panthert_8	308	0.696	0.770	0.009	0.0935	0.0008	0.41876	579.7	5.0	576.3	5.0	591.0	22.0	576.3	5.0	0.6
Panthert_8	150.8	0.6234	3.175	0.047	0.2445	0.0033	0.64228	1451.0	11.0	1410.0	17.0	1498.0	26.0	1498.0	26.0	5.9
Panthert_9	74.9	0.6358	3.370	0.048	0.2601	0.0040	0.48996	1497.0	11.0	1490.0	20.0	1508.0	29.0	1508.0	29.0	1.2
Panthert_10	108	1.805	2.040	0.031	0.1913	0.0024	0.5905	1128.0	10.0	1128.0	13.0	1135.0	28.0	1128.0	13.0	0.0
Panthert_11	172.5	0.83	0.471	0.008	0.0615	0.0007	0.18496	391.4	5.4	384.5	4.0	407.0	45.0	384.5	4.0	1.8
Panthert_12	357	0.95	2.631	0.050	0.2100	0.0032	0.80083	1308.0	14.0	1229.0	17.0	1435.0	18.0	1435.0	18.0	14.4

Panthert_13	66.9	1.547	1.593	0.030	0.1540	0.0021	0.46338	968.0	12.0	923.0	12.0	1063.0	32.0	923.0	12.0	4.6
Panthert_13	267	2.864	1.629	0.069	0.1287	0.0057	0.74638	980.0	27.0	780.0	33.0	1459.0	64.0	780.0	33.0	20.4
Panthert_14	98.2	1.774	3.161	0.051	0.2416	0.0034	0.51307	1447.0	12.0	1395.0	18.0	1529.0	26.0	1529.0	26.0	8.8
Panthert_15	100.6	0.5948	3.537	0.040	0.2582	0.0024	0.33027	1535.0	9.0	1480.0	12.0	1615.0	22.0	1615.0	22.0	8.4
Panthert_16	22.4	1.6	10.100	0.160	0.4485	0.0070	0.57485	2442.0	15.0	2387.0	31.0	2478.0	21.0	2478.0	21.0	3.7
Panthert_17	38.6	0.602	1.571	0.033	0.1488	0.0023	0.26462	959.0	13.0	896.0	13.0	1097.0	49.0	896.0	13.0	6.6
Panthert_18	147	1.307	0.436	0.011	0.0562	0.0012	0.24858	368.0	7.5	352.4	7.4	459.0	66.0	352.4	7.4	4.2
Panthert_19	117.5	2.898	11.118	0.088	0.4209	0.0042	0.48811	2532.6	7.4	2264.0	19.0	2754.0	14.0	2754.0	14.0	17.8
Panthert_20	100.8	2.082	2.205	0.030	0.1944	0.0024	0.4087	1182.0	9.5	1145.0	13.0	1253.0	29.0	1145.0	13.0	3.1
Panthert_21	239	2.38	3.855	0.036	0.2573	0.0029	0.67092	1605.0	7.8	1476.0	15.0	1771.0	13.0	1771.0	13.0	16.7
Panthert_22	208.7	1.254	3.886	0.045	0.2709	0.0028	0.47678	1611.7	9.2	1545.0	14.0	1670.0	16.0	1670.0	16.0	7.5
Panthert_23	248	1.64	0.098	0.003	0.0145	0.0003	0.051183	95.2	2.7	92.5	2.2	138.0	67.0	92.5	2.2	2.8
Panthert_24	158.8	0.6081	0.478	0.010	0.0614	0.0008	0.26358	396.0	6.6	383.8	4.6	477.0	40.0	383.8	4.6	3.1
Panthert_25	92.6	0.82	11.990	0.100	0.4373	0.0045	0.66893	2603.4	8.1	2338.0	20.0	2815.0	15.0	2815.0	15.0	16.9
Panthert_26	58.9	1.346	2.994	0.065	0.2005	0.0052	0.65455	1405.0	16.0	1177.0	28.0	1773.0	34.0	1177.0	28.0	16.2
Panthert_27	28.3	1.346	1.919	0.087	0.1561	0.0037	0.50412	1082.0	29.0	935.0	20.0	1412.0	70.0	935.0	20.0	13.6
Panthert_29	105.7	1.672	3.410	0.038	0.2581	0.0024	0.45466	1507.1	8.5	1481.0	12.0	1532.0	19.0	1532.0	19.0	3.3
Panthert_30	81	0.93	2.512	0.028	0.2090	0.0026	0.3489	1274.9	8.0	1223.0	14.0	1367.0	27.0	1367.0	27.0	10.5
Panthert_31	184.3	1.548	0.516	0.007	0.0671	0.0007	0.24774	422.0	5.0	418.6	4.5	453.0	37.0	418.6	4.5	0.8
Panthert_32	42.6	0.707	11.910	0.120	0.4654	0.0043	0.29575	2596.9	9.1	2463.0	19.0	2699.0	20.0	2699.0	20.0	8.7
Panthert_33	217	2.45	0.498	0.010	0.0642	0.0008	0.5221	409.8	6.5	401.3	4.6	452.0	35.0	401.3	4.6	2.1
Panthert_34	358	1.384	0.532	0.008	0.0679	0.0007	0.10424	432.8	5.4	423.2	4.2	476.0	35.0	423.2	4.2	2.2
Panthert_36	73.9	1.192	3.224	0.048	0.2496	0.0030	0.51357	1462.0	12.0	1436.0	15.0	1505.0	25.0	1505.0	25.0	4.6
Panthert_37	236	5.26	0.481	0.010	0.0625	0.0009	0.52422	398.6	6.6	391.0	5.6	452.0	43.0	391.0	5.6	1.9
Panthert_38	287	8.35	0.467	0.007	0.0615	0.0006	0.16122	388.9	4.5	384.9	3.8	420.0	34.0	384.9	3.8	1.0
Panthert_39	25.49	0.503	12.040	0.160	0.4868	0.0061	0.46483	2606.0	13.0	2556.0	26.0	2665.0	20.0	2665.0	20.0	4.1
Panthert_40	307	1.624	3.614	0.049	0.2525	0.0033	0.77567	1552.0	11.0	1451.0	17.0	1693.0	19.0	1693.0	19.0	14.3
Panthert_42	63.9	1.687	3.260	0.230	0.1689	0.0020	0.0012778	1440.0	57.0	1006.0	11.0	2140.0	140.0	DISC	DISC	30.1
Panthert_43	94.5	1.824	1.141	0.099	0.0922	0.0019	0.17682	764.0	46.0	568.0	11.0	1400.0	180.0	568.0	11.0	25.7
Panthert_44	37.5	0.953	1.693	0.034	0.1617	0.0024	0.10694	1005.0	13.0	966.0	13.0	1087.0	43.0	966.0	13.0	3.9
Panthert_45	146	1.162	0.477	0.012	0.0643	0.0011	0.51561	395.6	8.4	401.6	6.6	378.0	53.0	401.6	6.6	1.5
Panthert_46	39.1	0.4426	5.180	0.066	0.3221	0.0041	0.302	1850.0	11.0	1799.0	20.0	1895.0	28.0	1895.0	28.0	5.1
Panthert_47	40.9	0.6889	3.564	0.041	0.2564	0.0035	0.38846	1541.1	9.0	1471.0	18.0	1635.0	28.0	1635.0	28.0	10.0
Panthert_48	332	18.2	1.797	0.022	0.1755	0.0020	0.67359	1044.7	8.1	1042.0	11.0	1051.0	19.0	1042.0	11.0	0.3

Panthert_49	81.3	0.843	2.758	0.054	0.2214	0.0042	0.59287	1346.0	14.0	1289.0	22.0	1429.0	33.0	1429.0	33.0	9.8
Panthert_50	100.7	1.885	1.520	0.035	0.1467	0.0031	0.65975	937.0	14.0	882.0	18.0	1078.0	37.0	882.0	18.0	5.9
Panthert_51	345	1.247	0.093	0.003	0.0137	0.0003	0.13768	90.2	3.2	87.7	1.8	124.0	72.0	87.7	1.8	2.8
Panthert_52	58.7	0.615	1.660	0.027	0.1633	0.0019	0.12263	992.0	10.0	975.0	11.0	1014.0	39.0	975.0	11.0	1.7
Panthert_53	144.1	1.506	14.210	0.160	0.5120	0.0050	0.80208	2764.0	10.0	2665.0	21.0	2834.0	11.0	2834.0	11.0	6.0
Panthert_54	423	2.74	0.207	0.033	0.0126	0.0004	0.84958	189.0	27.0	81.0	2.7	1790.0	350.0	DISC	DISC	57.1
Panthert_55	98.3	1.463	0.452	0.011	0.0596	0.0008	0.042708	378.2	7.9	373.3	4.8	376.0	61.0	373.3	4.8	1.3
Panthert_56	132	1.127	5.666	0.067	0.3530	0.0038	0.64771	1927.3	9.9	1949.0	18.0	1892.0	16.0	1892.0	16.0	3.0
Panthert_57	47.4	1.339	1.263	0.022	0.1355	0.0016	0.19402	828.3	9.7	819.1	9.1	844.0	41.0	819.1	9.1	1.1
Panthert_58	94.9	1.698	1.538	0.025	0.1470	0.0022	0.44025	944.7	9.8	884.0	12.0	1084.0	30.0	884.0	12.0	6.4
Panthert_59	51.9	1.478	3.560	0.053	0.2656	0.0038	0.57766	1539.0	12.0	1521.0	19.0	1573.0	24.0	1573.0	24.0	3.3
Panthert_60	113.2	3.59	1.521	0.019	0.1540	0.0013	0.58078	938.4	7.6	923.0	7.2	973.0	21.0	923.0	7.2	1.6
Panthert_61	83.3	0.943	2.852	0.030	0.2321	0.0022	0.29926	1368.7	7.9	1347.0	12.0	1406.0	24.0	1406.0	24.0	4.2
Panthert_62	251	0.93	0.256	0.004	0.0358	0.0004	0.25344	231.3	3.0	226.9	2.7	270.0	38.0	226.9	2.7	1.9
Panthert_63	104.7	1.046	2.821	0.032	0.2324	0.0023	0.47728	1360.4	8.4	1347.0	12.0	1384.0	20.0	1384.0	20.0	2.7
Panthert_64	465	0.997	4.437	0.028	0.3000	0.0024	0.73791	1719.6	5.4	1691.0	12.0	1751.3	9.8	1751.3	9.8	3.4
Panthert_65	95	1.627	1.603	0.025	0.1625	0.0022	0.48358	971.9	9.6	970.0	12.0	972.0	28.0	970.0	12.0	0.2
Panthert_66	53.8	1.286	6.607	0.062	0.3753	0.0028	0.41842	2059.6	8.3	2056.0	14.0	2073.0	17.0	2073.0	17.0	0.8
Panthert_67	101.5	1.227	0.643	0.012	0.0807	0.0010	0.26158	504.3	7.4	500.2	5.8	510.0	43.0	500.2	5.8	0.8
Panthert_68	263	1.37	0.443	0.009	0.0583	0.0005	0.15384	372.1	6.1	365.1	3.3	427.0	43.0	365.1	3.3	1.9
Panthert_69	12.51	2.105	2.062	0.079	0.1847	0.0053	0.48819	1137.0	26.0	1092.0	29.0	1195.0	69.0	1092.0	29.0	4.0
Panthert_70	47.1	1.105	1.654	0.035	0.1667	0.0023	0.022199	990.0	14.0	994.0	12.0	982.0	51.0	994.0	12.0	0.4
Panthert_72	102.9	1.91	2.051	0.021	0.1877	0.0017	0.27623	1132.3	6.9	1108.8	9.3	1175.0	24.0	1108.8	9.3	2.1
Panthert_73	55.1	0.78	0.790	0.018	0.0948	0.0015	0.013058	591.6	9.9	583.6	9.0	582.0	59.0	583.6	9.0	1.4
Panthert_74	246	1.103	0.088	0.003	0.0131	0.0002	0.022227	85.7	3.0	83.8	1.3	139.0	86.0	83.8	1.3	2.2
Panthert_75	112	1.06	3.012	0.069	0.2352	0.0045	0.82485	1414.0	17.0	1361.0	23.0	1483.0	23.0	1483.0	23.0	8.2
Panthert_76	110.9	1.129	0.496	0.010	0.0647	0.0008	0.085243	408.3	6.9	404.1	4.6	427.0	52.0	404.1	4.6	1.0
Panthert_77	128.7	1.63	3.285	0.032	0.2542	0.0026	0.85357	1476.9	7.7	1460.0	13.0	1495.0	18.0	1495.0	18.0	2.3
Panthert_78	168.5	1.038	0.098	0.004	0.0146	0.0003	0.15506	94.8	3.8	93.5	1.7	107.0	87.0	93.5	1.7	1.4
Panthert_79	77.7	7.28	3.792	0.055	0.2537	0.0035	0.63442	1594.0	11.0	1457.0	18.0	1756.0	22.0	1756.0	22.0	17.0
Panthert_80	119	1.305	1.994	0.029	0.1816	0.0018	0.55898	1115.2	9.4	1076.0	10.0	1177.0	23.0	1076.0	10.0	3.5
Panthert_81	156.1	1.507	2.998	0.030	0.2358	0.0020	0.3439	1406.7	7.7	1365.0	11.0	1474.0	21.0	1474.0	21.0	7.4
Panthert_82	28.07	1.019	2.270	0.160	0.1482	0.0033	0.39575	1191.0	51.0	890.0	19.0	1780.0	110.0	890.0	19.0	25.3
Panthert_83	282.5	6.24	1.511	0.015	0.1525	0.0014	0.21535	934.8	6.2	914.8	8.1	974.0	28.0	914.8	8.1	2.1

Panthert_84	264	1.255	0.097	0.003	0.0144	0.0003	0.12788	94.0	2.6	92.1	1.8	134.0	70.0	92.1	1.8	2.0
Panthert_86	161.1	0.833	1.985	0.024	0.1794	0.0019	0.24459	1109.9	8.3	1064.0	10.0	1178.0	28.0	1064.0	10.0	4.1
Panthert_87	86.3	1.92	4.652	0.061	0.2899	0.0038	0.58306	1762.0	12.0	1641.0	19.0	1890.0	21.0	1890.0	21.0	13.2
Panthert_88	56.9	1.664	1.775	0.032	0.1658	0.0025	0.4654	1035.0	12.0	989.0	14.0	1113.0	34.0	989.0	14.0	4.4
Panthert_89	147.2	1.09	2.787	0.027	0.2293	0.0028	0.38343	1351.9	7.2	1330.0	15.0	1378.0	24.0	1378.0	24.0	3.5
Panthert_90	146.4	1.375	4.054	0.039	0.2869	0.0026	0.51053	1644.7	7.9	1626.0	13.0	1664.0	16.0	1664.0	16.0	2.3
Panthert_91	92.9	3.41	1.697	0.025	0.1625	0.0026	0.61906	1008.0	9.6	971.0	14.0	1079.0	29.0	971.0	14.0	3.7
Panthert_92	69.1	1.9	2.082	0.040	0.1865	0.0027	0.70446	1148.0	14.0	1102.0	15.0	1229.0	27.0	1102.0	15.0	4.0
Panthert_93	70.9	15.91	0.733	0.016	0.0882	0.0013	0.18591	557.6	9.6	544.9	7.6	594.0	47.0	544.9	7.6	2.3
Panthert_94	223	1.482	0.103	0.004	0.0155	0.0003	0.16292	99.6	3.4	99.4	2.1	111.0	73.0	99.4	2.1	0.2
Panthert_95	63.3	1.007	0.805	0.018	0.0924	0.0015	0.35448	599.1	9.9	569.8	8.6	674.0	48.0	569.8	8.6	4.9
Panthert_96	175	1.384	4.256	0.038	0.2920	0.0021	0.4671	1684.5	7.4	1651.0	11.0	1730.0	16.0	1730.0	16.0	4.6
Panthert_97	302	1.207	0.254	0.005	0.0361	0.0006	0.38106	229.3	3.8	228.5	3.4	211.0	42.0	228.5	3.4	0.3
Panthert_98	64.3	1.225	3.745	0.049	0.2659	0.0031	0.26165	1580.0	10.0	1520.0	16.0	1637.0	31.0	1637.0	31.0	7.1
Panthert_99	276	4.11	3.736	0.048	0.2666	0.0035	0.84387	1579.0	10.0	1523.0	18.0	1638.0	17.0	1638.0	17.0	7.0
Panthert_100	102.6	1.827	2.972	0.035	0.2295	0.0026	0.65283	1399.6	8.9	1331.0	13.0	1484.0	18.0	1484.0	18.0	10.3
Panthert_101	41	0.794	4.866	0.051	0.3057	0.0037	0.37413	1796.9	9.1	1719.0	18.0	1887.0	22.0	1887.0	22.0	8.9
Panthert_102	262	1.186	0.797	0.011	0.0950	0.0008	0.16272	594.9	6.1	584.8	5.0	610.0	31.0	584.8	5.0	1.7
Panthert_103	353	1.35	4.644	0.036	0.3063	0.0027	0.67826	1756.8	6.6	1722.0	13.0	1786.0	12.0	1786.0	12.0	3.6
Panthert_104	74.7	1.823	3.448	0.039	0.2451	0.0023	0.51425	1516.9	9.1	1413.0	12.0	1645.0	21.0	1645.0	21.0	14.1
Panthert_105	326	1.48	0.515	0.010	0.0654	0.0010	0.619	421.8	6.7	408.3	5.7	476.0	33.0	408.3	5.7	3.2
Panthert_107	133.2	1.878	11.800	0.110	0.4688	0.0049	0.70652	2587.7	8.6	2480.0	21.0	2665.0	11.0	2665.0	11.0	6.9
Panthert_109	124.5	1.446	4.621	0.043	0.3051	0.0027	0.4321	1754.4	7.6	1716.0	14.0	1786.0	18.0	1786.0	18.0	3.9
Panthert_110	129.6	1.624	0.182	0.006	0.0260	0.0004	0.11534	169.9	4.7	165.7	2.4	233.0	72.0	165.7	2.4	2.5
Panthert_111	95.3	1.18	3.528	0.075	0.2624	0.0038	0.7387	1534.0	17.0	1502.0	19.0	1565.0	30.0	1565.0	30.0	4.0
Panthert_112	489	1.231	0.099	0.004	0.0140	0.0003	0.33932	96.1	3.4	89.8	1.6	248.0	78.0	89.8	1.6	6.6
Panthert_113	42.3	1.131	0.768	0.027	0.0910	0.0017	0.29631	577.0	16.0	561.5	9.8	684.0	81.0	561.5	9.8	2.7
Panthert_114	48.5	0.932	0.885	0.022	0.1004	0.0018	0.25523	644.0	12.0	616.0	11.0	743.0	54.0	616.0	11.0	4.3
Panthert_115	64	0.948	2.078	0.033	0.1868	0.0027	0.3056	1142.0	11.0	1104.0	15.0	1246.0	34.0	1104.0	15.0	3.3
Panthert_116	75.9	1.558	2.975	0.033	0.2283	0.0027	0.40421	1400.5	8.5	1326.0	14.0	1549.0	24.0	1549.0	24.0	14.4
Panthert_118	836	1.897	0.720	0.009	0.0871	0.0010	0.61657	550.4	5.6	538.1	6.2	630.0	26.0	538.1	6.2	2.2
Panthert_119	53.6	2.265	1.285	0.027	0.1359	0.0022	0.54356	838.0	12.0	821.0	12.0	923.0	41.0	821.0	12.0	2.0
Panthert_120	69.3	1.228	9.490	0.170	0.4273	0.0084	0.74388	2385.0	17.0	2293.0	38.0	2482.0	22.0	2482.0	22.0	7.6

Table 2b: North San Rafael Swell, UT

Sample Name:								207/235		206/238		206/207		Best age		
Grain #	[U] ppm	U/Th	207/235	2σ error	206/238	2σ error	RHO	Age Ma	2σ error	Age (Ma)	2σ error	Age (Ma)	2σ error	(Ma)	2σ error	% Discordance*
11UCCR04_1	70.9	0.866	4.259	0.038	0.2936	0.0028	0.44091	1685.0	7.3	1661.0	14.0	1719.0	11.0	1719.0	11.0	3.4
11UCCR04_2	61.7	0.744	2.185	0.027	0.2046	0.0028	0.50485	1175.4	8.7	1200.0	15.0	1133.0	16.0	1133.0	15.0	2.1
11UCCR04_3	168.8	3.089	4.410	0.110	0.2621	0.0023	0.35814	1715.0	20.0	1501.0	12.0	2002.0	37.0	2002.0	37.0	25.0
11UCCR04_4	28.7	0.4932	4.397	0.086	0.3111	0.0047	0.56573	1710.0	16.0	1746.0	23.0	1682.0	17.0	1682.0	17.0	3.8
11UCCR04_5	32.6	1.436	2.029	0.039	0.1906	0.0028	0.080526	1123.0	13.0	1124.0	15.0	1116.0	26.0	1124.0	15.0	0.1
11UCCR04_6	254	1.6	4.633	0.038	0.3120	0.0026	0.6673	1755.9	6.7	1750.0	13.0	1753.4	9.2	1753.4	9.2	0.2
11UCCR04_7	220.8	1.847	4.800	0.035	0.3242	0.0024	0.67034	1784.6	6.1	1810.0	12.0	1759.4	6.6	1759.4	6.6	2.9
11UCCR04_8	126.9	0.92	0.460	0.008	0.0602	0.0008	0.11507	383.8	5.7	376.9	4.7	428.0	31.0	376.9	4.7	1.8
11UCCR04_9	67.5	0.556	2.931	0.033	0.2438	0.0031	0.44954	1389.4	8.6	1406.0	16.0	1360.0	12.0	1360.0	12.0	3.4
11UCCR04_10	69	1.41	1.884	0.028	0.1821	0.0017	0.068874	1077.1	9.3	1078.3	9.3	1074.0	22.0	1078.3	9.3	0.1
11UCCR04_11	114	1.369	2.013	0.023	0.1928	0.0017	0.33524	1121.3	7.5	1136.6	9.0	1097.0	12.0	1136.6	9.0	1.4
11UCCR04_12	124	0.937	5.303	0.035	0.3412	0.0030	0.40345	1869.0	5.7	1892.0	14.0	1844.6	9.5	1844.6	9.5	2.6
11UCCR04_13	151	0.986	2.035	0.020	0.1926	0.0019	0.33183	1126.7	6.7	1135.0	10.0	1114.0	13.0	1135.0	10.0	0.7
11UCCR04_14	90	1.548	1.905	0.024	0.1806	0.0013	0.093633	1082.2	8.3	1070.1	7.3	1116.0	15.0	1070.1	7.3	1.1
11UCCR04_15	24.5	0.6182	1.867	0.043	0.1795	0.0023	0.30108	1070.0	15.0	1066.0	13.0	1084.0	31.0	1066.0	13.0	0.4
11UCCR04_16	71	1.209	2.683	0.035	0.2273	0.0027	0.30785	1322.9	9.6	1320.0	14.0	1338.0	19.0	1338.0	19.0	1.3
11UCCR04_17	98.6	1.155	1.648	0.019	0.1657	0.0016	0.50908	989.1	7.1	988.4	8.7	992.0	12.0	988.4	8.7	0.1
11UCCR04_18	261.2	1.008	4.330	0.110	0.2727	0.0032	0.62065	1699.0	21.0	1557.0	16.0	1906.0	37.0	1906.0	37.0	18.3
11UCCR04_19	192	0.642	12.300	0.140	0.4511	0.0053	0.88347	2628.0	11.0	2400.0	23.0	2807.0	5.9	2807.0	5.9	14.5
11UCCR04_20	130	2.26	3.707	0.047	0.2571	0.0031	0.71315	1573.0	10.0	1475.0	16.0	1707.8	9.6	1707.8	9.6	13.6
11UCCR04_21	236	1.77	2.007	0.017	0.1898	0.0015	0.59596	1118.5	6.1	1120.3	8.0	1120.1	9.0	1120.3	8.0	0.2
11UCCR04_22	48.1	0.616	0.838	0.019	0.0999	0.0015	0.39953	618.0	11.0	613.8	8.9	639.0	28.0	613.8	8.9	0.7
11UCCR04_23	127	5.8	5.343	0.051	0.3310	0.0029	0.39253	1875.1	8.1	1843.0	14.0	1919.0	11.0	1919.0	11.0	4.0
11UCCR04_24	210	2.061	4.603	0.036	0.3072	0.0028	0.66501	1749.4	6.5	1726.0	14.0	1776.0	6.9	1776.0	6.9	2.8
11UCCR04_25	105.3	2.726	4.365	0.039	0.3060	0.0030	0.57012	1707.0	7.4	1721.0	15.0	1703.0	9.9	1703.0	9.9	1.1
11UCCR04_26	135.5	1.322	2.966	0.040	0.2348	0.0028	0.63231	1398.0	10.0	1360.0	14.0	1449.0	13.0	1449.0	13.0	6.1
11UCCR04_27	235	0.813	2.453	0.055	0.2002	0.0044	0.92351	1259.0	16.0	1179.0	24.0	1397.7	9.4	1179.0	24.0	6.4

11UCCR04_28	35.4	1.695	2.594	0.044	0.2217	0.0028	0.50171	1299.0	13.0	1293.0	15.0	1302.0	20.0	1302.0	20.0	0.7
11UCCR04_29	239	8.9	0.751	0.013	0.0893	0.0013	0.50891	568.1	7.8	551.3	7.9	637.0	21.0	551.3	7.9	3.0
11UCCR04_30	115	0.953	3.262	0.024	0.2584	0.0021	0.58961	1474.0	6.1	1481.0	11.0	1473.9	7.4	1473.9	7.4	0.5
11UCCR04_31	14.66	0.643	5.141	0.070	0.3185	0.0046	0.52906	1842.0	12.0	1782.0	23.0	1910.0	16.0	1910.0	16.0	6.7
11UCCR04_32	114.9	0.4947	3.920	0.031	0.2843	0.0022	0.3525	1617.3	6.5	1613.0	11.0	1627.8	9.5	1627.8	9.5	0.9
11UCCR04_33	156.6	0.328	5.664	0.033	0.3442	0.0024	0.62024	1925.6	5.1	1907.0	12.0	1942.7	5.4	1942.7	5.4	1.8
11UCCR04_34	121	0.407	0.875	0.015	0.1036	0.0010	0.11963	637.4	8.1	635.2	5.9	648.0	27.0	635.2	5.9	0.3
11UCCR04_35	28.8	0.829	2.759	0.043	0.2342	0.0023	0.24099	1343.0	11.0	1356.0	12.0	1336.0	22.0	1336.0	22.0	1.5
11UCCR04_36	161	1.215	3.176	0.032	0.2525	0.0027	0.51471	1450.7	7.8	1451.0	14.0	1443.0	14.0	1443.0	14.0	0.6
11UCCR04_37	71.7	2.496	3.785	0.077	0.2518	0.0049	0.70545	1588.0	16.0	1447.0	25.0	1782.0	18.0	1782.0	18.0	18.8
11UCCR04_38	41.1	1.261	5.693	0.061	0.3529	0.0037	0.37996	1929.5	9.2	1948.0	18.0	1913.0	11.0	1913.0	11.0	1.8
11UCCR04_39	72.2	1.496	3.434	0.032	0.2639	0.0023	0.3211	1511.6	7.4	1511.0	12.0	1516.0	11.0	1516.0	11.0	0.3
11UCCR04_40	142.6	0.807	0.829	0.011	0.0993	0.0013	0.31223	612.6	6.2	610.0	7.7	607.0	21.0	610.0	7.7	0.4
11UCCR04_41	88.5	0.494	3.207	0.051	0.2580	0.0037	0.68849	1460.0	13.0	1482.0	20.0	1431.0	13.0	1431.0	13.0	3.6
11UCCR04_42	64.6	0.791	3.164	0.033	0.2518	0.0029	0.41556	1447.8	8.2	1447.0	15.0	1434.0	14.0	1434.0	14.0	0.9
11UCCR04_43	35	1.292	2.179	0.038	0.2008	0.0028	0.13977	1173.0	12.0	1183.0	15.0	1152.0	21.0	1183.0	15.0	0.9
11UCCR04_44	265	2.29	1.859	0.016	0.1783	0.0014	0.51569	1066.1	5.7	1057.4	7.9	1080.0	10.0	1057.4	7.9	0.8
11UCCR04_45	18.27	1.139	3.220	0.100	0.2444	0.0077	0.32439	1460.0	25.0	1409.0	40.0	1570.0	49.0	1570.0	49.0	10.3
11UCCR04_46	90.9	0.499	1.127	0.033	0.1245	0.0036	0.78587	765.0	16.0	756.0	21.0	788.0	23.0	756.0	21.0	1.2
11UCCR04_47	40.4	0.836	1.965	0.027	0.1833	0.0019	0.16788	1102.8	9.3	1085.0	11.0	1148.0	19.0	1085.0	11.0	1.6
11UCCR04_48	75.5	0.466	5.169	0.046	0.3356	0.0029	0.37794	1846.9	7.5	1865.0	14.0	1823.0	11.0	1823.0	11.0	2.3
11UCCR04_49	63.7	0.932	1.907	0.024	0.1851	0.0017	0.28097	1083.8	8.7	1094.6	9.3	1068.0	16.0	1094.6	9.3	1.0
11UCCR04_50	74	0.635	1.942	0.027	0.1872	0.0022	0.30471	1096.0	9.4	1106.0	12.0	1095.0	17.0	1106.0	12.0	0.9
11UCCR04_51	84.2	0.668	3.182	0.044	0.2512	0.0029	0.49692	1452.0	11.0	1444.0	15.0	1465.0	15.0	1465.0	15.0	1.4
11UCCR04_52	40	0.789	5.240	0.060	0.3376	0.0028	0.44231	1859.4	9.9	1875.0	14.0	1842.0	10.0	1842.0	10.0	1.8
11UCCR04_53	133	0.5565	5.177	0.035	0.3334	0.0023	0.48418	1848.6	5.7	1856.0	11.0	1849.0	8.6	1849.0	8.6	0.4
11UCCR04_54	146	1.63	1.946	0.021	0.1859	0.0016	0.52329	1097.3	6.9	1099.0	8.5	1093.0	10.0	1099.0	8.5	0.2
11UCCR04_55	253	2.41	1.733	0.021	0.1686	0.0018	0.67059	1020.3	7.7	1004.3	9.7	1056.0	12.0	1004.3	9.7	1.6
11UCCR04_56	84	1.086	5.646	0.081	0.3510	0.0038	0.73078	1923.0	13.0	1939.0	18.0	1900.0	10.0	1900.0	10.0	2.1
11UCCR04_57	89	1.308	1.918	0.021	0.1844	0.0017	0.19645	1087.7	7.6	1090.7	9.4	1089.0	13.0	1090.7	9.4	0.3
11UCCR04_58	558	1.824	2.790	0.037	0.2264	0.0036	0.96798	1352.0	10.0	1316.0	19.0	1415.6	8.9	1415.6	8.9	7.0
11UCCR04_59	219	0.575	3.869	0.030	0.2820	0.0020	0.50053	1606.8	6.3	1601.0	10.0	1609.4	7.3	1609.4	7.3	0.5
11UCCR04_60	429	1.976	4.000	0.110	0.2354	0.0057	0.95821	1629.0	22.0	1361.0	30.0	1999.0	11.0	DISC	DISC	31.9
11UCCR04_61	148.4	0.919	1.320	0.120	0.0975	0.0016	0.52527	829.0	50.0	599.7	9.2	1460.0	160.0	599.7	9.2	27.7
11UCCR04_62	1015	2.324	1.457	0.020	0.1402	0.0019	0.95997	912.6	8.4	846.0	11.0	1082.0	6.5	846.0	11.0	7.3

11UCCR04_63	166.9	0.859	3.160	0.024	0.2548	0.0020	0.45316	1447.0	5.9	1464.0	11.0	1432.4	7.8	1432.4	7.8	2.2
11UCCR04_64	18.98	2.68	1.922	0.058	0.1808	0.0029	0.050733	1088.0	20.0	1073.0	16.0	1068.0	36.0	1073.0	16.0	1.4
11UCCR04_65	299	1.976	4.550	0.060	0.3035	0.0033	0.75608	1740.0	11.0	1709.0	17.0	1772.0	14.0	1772.0	14.0	3.6
11UCCR04_66	80	1.261	12.570	0.100	0.4960	0.0045	0.79218	2647.1	7.5	2596.0	19.0	2684.8	5.2	2684.8	5.2	3.3
11UCCR04_67	762	6.42	1.692	0.025	0.1664	0.0026	0.78725	1004.9	9.4	995.0	13.0	1029.0	15.0	995.0	13.0	1.0
11UCCR04_68	80.6	0.653	2.951	0.047	0.2375	0.0038	0.72905	1394.0	12.0	1373.0	20.0	1440.0	12.0	1440.0	12.0	4.7
11UCCR04_69	107	1.02	4.789	0.071	0.3109	0.0043	0.81011	1782.0	13.0	1745.0	21.0	1821.2	9.5	1821.2	9.5	4.2
11UCCR04_70	76.2	1.381	7.136	0.069	0.4005	0.0042	0.57384	2127.8	8.7	2171.0	19.0	2079.0	11.0	2079.0	11.0	4.4
11UCCR04_71	256.3	3.309	1.622	0.014	0.1656	0.0014	0.53221	979.3	5.7	987.7	8.0	968.8	8.9	987.7	8.0	0.9
11UCCR04_72	200	1.255	10.484	0.066	0.4694	0.0032	0.48393	2478.9	5.7	2481.0	14.0	2476.0	7.1	2476.0	7.1	0.2
11UCCR04_73	30.7	0.6493	5.204	0.075	0.3347	0.0042	0.2873	1852.0	12.0	1861.0	20.0	1841.0	17.0	1841.0	17.0	1.1
11UCCR04_74	73.2	1.136	1.977	0.029	0.1880	0.0019	0.33747	1109.1	9.8	1112.0	10.0	1110.0	18.0	1112.0	10.0	0.3
11UCCR04_75	67.6	0.5035	2.855	0.031	0.2348	0.0020	0.29495	1370.7	8.4	1359.0	11.0	1384.0	12.0	1384.0	12.0	1.8
11UCCR04_76	423	1.168	0.097	0.002	0.0147	0.0002	0.40614	94.3	2.1	94.3	1.5	152.0	25.0	94.3	1.5	0.0
11UCCR04_77	65.9	0.597	3.244	0.037	0.2590	0.0024	0.38318	1467.0	8.9	1484.0	12.0	1434.0	11.0	1434.0	11.0	3.5
11UCCR04_78	53.4	0.756	1.794	0.030	0.1761	0.0025	0.68111	1042.0	11.0	1046.0	14.0	1038.0	16.0	1046.0	14.0	0.4
11UCCR04_79	55	1.07	5.205	0.050	0.3368	0.0036	0.45606	1852.8	8.1	1871.0	17.0	1840.0	11.0	1840.0	11.0	1.7
11UCCR04_80	32.8	1.302	1.910	0.035	0.1813	0.0021	0.24846	1088.0	12.0	1074.0	12.0	1106.0	21.0	1074.0	12.0	1.3
11UCCR04_81	108.1	0.2879	0.189	0.007	0.0275	0.0004	0.073494	175.3	5.9	175.1	2.8	254.0	39.0	175.1	2.8	0.1
11UCCR04_82	77	0.88	1.900	0.027	0.1825	0.0022	0.39552	1081.6	9.2	1080.0	12.0	1058.0	18.0	1080.0	12.0	0.1
11UCCR04_83	81.8	1.002	3.128	0.037	0.2474	0.0025	0.44828	1438.8	9.2	1425.0	13.0	1458.0	11.0	1458.0	11.0	2.3
11UCCR04_84	118.8	1.582	6.922	0.055	0.3914	0.0033	0.67144	2102.0	7.2	2129.0	15.0	2073.6	6.7	2073.6	6.7	2.7
11UCCR04_85	50.4	2.03	4.277	0.053	0.3018	0.0035	0.59081	1689.0	11.0	1702.0	18.0	1677.0	14.0	1677.0	14.0	1.5
11UCCR04_86	123.4	1.737	3.180	0.027	0.2551	0.0020	0.49512	1453.6	7.0	1465.8	9.9	1438.7	8.7	1438.7	8.7	1.9
11UCCR04_87	104	0.91	3.224	0.031	0.2603	0.0024	0.49363	1463.4	7.7	1491.0	12.0	1427.0	10.0	1427.0	10.0	4.5
11UCCR04_88	81.8	1.35	3.305	0.031	0.2602	0.0024	0.47041	1481.6	7.4	1491.0	12.0	1478.6	9.7	1478.6	9.7	0.8
11UCCR04_89	64.4	0.4195	5.398	0.047	0.3479	0.0024	0.33285	1885.9	7.5	1924.0	12.0	1848.0	11.0	1848.0	11.0	4.1
11UCCR04_90	53.1	1.391	1.649	0.024	0.1661	0.0020	0.2169	988.5	9.1	990.0	11.0	983.0	22.0	990.0	11.0	0.2
11UCCR04_91	253	1.422	1.951	0.019	0.1881	0.0021	0.57239	1099.2	6.6	1111.0	11.0	1076.0	13.0	1111.0	11.0	1.1
11UCCR04_92	290	1.117	0.336	0.005	0.0467	0.0006	0.38929	294.0	4.0	294.4	3.4	322.0	20.0	294.4	3.4	0.1
11UCCR04_93	40.6	0.942	1.925	0.038	0.1885	0.0023	0.49266	1093.0	14.0	1113.0	13.0	1046.0	20.0	1113.0	13.0	1.8
11UCCR04_94	334	1.834	4.396	0.033	0.2923	0.0023	0.6914	1712.1	6.3	1653.0	12.0	1776.7	7.8	1776.7	7.8	7.0
11UCCR04_95	90.6	1.007	4.980	0.170	0.3010	0.0051	0.2318	1812.0	28.0	1696.0	25.0	1945.0	51.0	1945.0	51.0	12.8
11UCCR04_96	48.1	0.3745	5.442	0.057	0.3454	0.0033	0.32718	1890.7	9.0	1914.0	15.0	1863.0	13.0	1863.0	13.0	2.7
11UCCR04_97	171	1.693	0.523	0.008	0.0672	0.0007	0.169	426.5	5.5	419.3	4.1	471.0	22.0	419.3	4.1	1.7

11UCCR04_98	810	1.31	0.428	0.040	0.0542	0.0057	0.97408	363.0	30.0	339.0	35.0	541.0	89.0	339.0	35.0	6.6
11UCCR04_99	99.3	0.797	0.596	0.012	0.0775	0.0009	0.12604	475.0	8.1	481.3	5.6	473.0	28.0	481.3	5.6	1.3
11UCCR04_100	55.7	0.666	3.017	0.040	0.2460	0.0027	0.39973	1411.0	10.0	1418.0	14.0	1395.0	14.0	1395.0	14.0	1.6
11UCCR04_101	81.8	0.626	7.409	0.068	0.4064	0.0036	0.75926	2161.4	8.2	2198.0	17.0	2128.1	8.5	2128.1	8.5	3.3
11UCCR04_102	61.4	0.807	1.979	0.034	0.1867	0.0023	0.43508	1109.0	12.0	1103.0	13.0	1105.0	18.0	1103.0	13.0	0.5
11UCCR04_103	106.5	1.257	2.059	0.029	0.1933	0.0021	0.55241	1136.8	9.6	1140.0	11.0	1124.0	17.0	1140.0	11.0	0.3
11UCCR04_104	245	0.675	10.100	0.120	0.4240	0.0048	0.73417	2445.0	12.0	2278.0	22.0	2580.6	9.1	2580.6	9.1	11.7
11UCCR04_105	112.4	1.07	1.967	0.028	0.1870	0.0025	0.54983	1104.5	9.3	1105.0	13.0	1128.0	12.0	1105.0	13.0	0.0
11UCCR04_106	68.9	0.598	2.942	0.044	0.2433	0.0030	0.43391	1394.0	12.0	1404.0	15.0	1381.0	16.0	1381.0	16.0	1.7
11UCCR04_107	273	0.916	2.306	0.019	0.2101	0.0015	0.69962	1213.7	5.9	1229.1	8.0	1188.1	6.6	1188.1	8.0	1.3
11UCCR04_108	58.6	1.094	2.483	0.037	0.2214	0.0031	0.39649	1266.0	11.0	1291.0	16.0	1231.0	21.0	1231.0	21.0	4.9
11UCCR04_109	141.4	1.092	3.044	0.029	0.2461	0.0023	0.3703	1418.5	7.3	1418.0	12.0	1430.0	11.0	1430.0	11.0	0.8
11UCCR04_110	161.9	4.38	4.384	0.041	0.3072	0.0031	0.62623	1708.8	7.8	1727.0	15.0	1695.0	10.0	1695.0	10.0	1.9
11UCCR04_111	109	0.925	1.900	0.024	0.1808	0.0016	0.39221	1080.3	8.4	1073.4	9.0	1098.0	13.0	1073.4	9.0	0.6
11UCCR04_112	305	4.86	0.537	0.007	0.0696	0.0008	0.42302	436.4	4.6	433.8	4.9	449.0	17.0	433.8	4.9	0.6
11UCCR04_113	111	2.22	3.288	0.034	0.2651	0.0020	0.53641	1477.7	8.1	1516.0	10.0	1439.2	8.5	1439.2	8.5	5.3
11UCCR04_114	132	1.29	5.362	0.062	0.3485	0.0051	0.67949	1878.0	9.9	1927.0	24.0	1824.0	10.0	1824.0	10.0	5.6
11UCCR04_115	29	1.58	0.817	0.025	0.0986	0.0019	0.21741	604.0	14.0	606.0	11.0	670.0	43.0	606.0	11.0	0.3
11UCCR04_116	164	1.297	5.283	0.046	0.3403	0.0040	0.59042	1866.7	7.6	1887.0	19.0	1836.0	12.0	1836.0	12.0	2.8
11UCCR04_117	170.6	1.613	3.242	0.027	0.2617	0.0019	0.48261	1467.0	6.4	1498.4	9.7	1416.0	11.0	1416.0	11.0	5.8
11UCCR04_118	89.6	0.927	3.254	0.026	0.2609	0.0021	0.49095	1469.8	6.2	1494.0	11.0	1434.4	9.3	1434.4	9.3	4.2
11UCCR04_119	90.6	13	1.986	0.026	0.1916	0.0023	0.41983	1109.9	9.0	1130.0	12.0	1071.0	16.0	1130.0	12.0	1.8
11UCCR04_120	195	1.99	1.779	0.018	0.1767	0.0015	0.50565	1038.1	6.8	1048.8	8.1	1021.0	11.0	1048.8	8.1	1.0
11UCCR04_121	51.3	0.738	13.167	0.089	0.5098	0.0046	0.53391	2691.3	6.4	2655.0	20.0	2722.1	8.0	2722.1	8.0	2.5
11UCCF03_1	138.8	1.48	0.744	0.010	0.0909	0.0011	0.70838	564.9	5.5	560.9	6.3	580.0	13.0	560.9	6.3	0.7
11UCCF03_2	132.5	1.2	0.865	0.015	0.1028	0.0014	0.61314	633.3	7.9	630.5	8.2	636.0	16.0	630.5	8.2	0.4
11UCCF03_3	42.3	3.221	1.844	0.028	0.1758	0.0021	0.34557	1062.0	10.0	1044.0	12.0	1099.0	24.0	1044.0	12.0	1.7
11UCCF03_4	329	1.53	0.888	0.013	0.1042	0.0016	0.87462	645.4	7.3	638.8	9.2	664.0	10.0	638.8	9.2	1.0
11UCCF03_5	162	1.609	4.572	0.052	0.3116	0.0042	0.84251	1743.5	9.5	1748.0	21.0	1737.8	6.2	1737.8	6.2	0.6
11UCCF03_6	274.2	2.34	2.927	0.040	0.1908	0.0026	0.91272	1388.0	10.0	1125.0	14.0	1821.1	7.9	1125.0	14.0	18.9
11UCCF03_7	288	1.443	0.103	0.003	0.0144	0.0002	0.39373	99.6	2.9	91.8	1.4	269.0	42.0	91.8	1.4	7.8
11UCCF03_8	375	1.473	5.330	0.190	0.3029	0.0095	0.9892	1864.0	33.0	1702.0	48.0	2082.0	8.2	2082.0	8.2	18.3
11UCCF03_9	100.7	0.782	3.015	0.032	0.2444	0.0024	0.63881	1411.0	8.2	1409.0	13.0	1417.8	8.3	1417.8	8.3	0.6

11UCCF03_10	499	1	0.090	0.004	0.0134	0.0005	0.8519	87.0	3.3	85.6	3.2	162.0	21.0	85.6	3.2	1.6
11UCCF03_11	100.6	1.466	0.607	0.008	0.0762	0.0008	0.1728	481.6	5.2	473.6	4.6	521.0	24.0	473.6	4.6	1.7
11UCCF03_12	96.7	0.8213	4.262	0.043	0.3034	0.0041	0.70925	1688.2	8.8	1708.0	20.0	1677.0	10.0	1677.0	10.0	1.8
11UCCF03_13	289	1.77	0.096	0.006	0.0140	0.0004	0.81646	92.9	5.5	89.8	2.7	225.0	59.0	89.8	2.7	3.3
11UCCF03_14	100.6	1.029	3.849	0.030	0.2793	0.0019	0.47817	1602.7	6.2	1587.9	9.7	1633.7	8.0	1633.7	8.0	2.8
11UCCF03_15	92.5	2.323	1.629	0.021	0.1622	0.0021	0.53386	981.0	8.0	969.0	12.0	1013.0	15.0	969.0	12.0	1.2
11UCCF03_16	255	5.62	0.557	0.008	0.0723	0.0011	0.64799	449.5	5.4	450.0	6.4	463.0	14.0	450.0	6.4	0.1
11UCCF03_17	1075	1.248	0.297	0.015	0.0338	0.0015	0.79737	265.0	12.0	214.0	9.5	676.0	52.0	214.0	9.5	19.2
11UCCF03_18	367	4.29	4.544	0.047	0.3090	0.0040	0.86375	1740.1	8.3	1736.0	20.0	1743.7	4.9	1743.7	4.9	0.4
11UCCF03_19	306	1.57	2.813	0.032	0.2324	0.0028	0.77045	1358.4	8.4	1347.0	15.0	1383.1	8.8	1383.1	8.8	2.6
11UCCF03_20	176.2	0.708	2.210	0.031	0.1984	0.0029	0.77952	1183.5	9.7	1166.0	16.0	1215.0	10.0	1166.0	16.0	1.5
11UCCF03_21	144.8	1.218	1.969	0.025	0.1832	0.0022	0.7911	1104.2	8.5	1084.0	12.0	1142.5	8.6	1084.0	12.0	1.8
11UCCF03_22	189	1.375	3.614	0.037	0.2716	0.0033	0.79273	1552.0	8.2	1549.0	17.0	1568.1	6.9	1568.1	6.9	1.2
11UCCF03_23	58.3	0.1862	4.241	0.069	0.2652	0.0021	0.50333	1680.0	13.0	1516.0	11.0	1911.0	21.0	1911.0	21.0	20.7
11UCCF03_24	105.6	1.443	1.331	0.018	0.1351	0.0015	0.67911	860.1	8.0	816.6	8.4	976.0	14.0	816.6	8.4	5.1
11UCCF03_25	191	0.955	0.089	0.003	0.0136	0.0002	0.32948	87.0	2.3	86.9	1.2	173.0	34.0	86.9	1.2	0.1
11UCCF03_26	441	1.003	0.309	0.062	0.0157	0.0008	0.95578	256.0	42.0	100.6	4.7	1960.0	250.0	DISC	DISC	60.7
11UCCF03_27	338	2.92	2.310	0.130	0.1920	0.0081	0.9713	1212.0	39.0	1136.0	43.0	1327.0	43.0	1136.0	43.0	6.3
11UCCF03_28	84.1	1.074	1.088	0.033	0.1191	0.0013	0.32569	747.0	16.0	725.3	7.6	782.0	40.0	725.3	7.6	2.9
11UCCF03_29	106.9	1.048	1.708	0.016	0.1703	0.0013	0.38718	1011.3	5.8	1013.6	7.3	1027.0	12.0	1013.6	7.3	0.2
11UCCF03_30	98.7	0.716	5.881	0.061	0.3500	0.0034	0.76277	1957.7	8.9	1934.0	16.0	1988.7	5.7	1988.7	5.7	2.8
11UCCF03_31	28.2	1.54	1.800	0.150	0.1560	0.0100	0.87176	1042.0	56.0	932.0	59.0	1328.0	36.0	932.0	59.0	10.6
11UCCF03_32	104.1	0.676	1.609	0.019	0.1590	0.0018	0.67039	973.3	7.4	951.0	9.8	1040.0	10.0	951.0	9.8	2.3
11UCCF03_33	82.2	0.416	3.645	0.063	0.2527	0.0061	0.86974	1561.0	14.0	1451.0	31.0	1715.0	17.0	1715.0	17.0	15.4
11UCCF03_34	83	0.524	4.274	0.036	0.3001	0.0027	0.70426	1687.9	6.8	1692.0	14.0	1689.4	7.6	1689.4	7.6	0.2
11UCCF03_35	60.4	0.512	0.806	0.021	0.0956	0.0018	0.65965	600.0	12.0	588.0	10.0	647.0	26.0	588.0	10.0	2.0
11UCCF03_36	263	1.121	0.463	0.008	0.0598	0.0009	0.7244	385.8	5.3	374.2	5.7	441.0	22.0	374.2	5.7	3.0
11UCCF03_37	197	1.16	2.820	0.170	0.1970	0.0120	0.99445	1349.0	47.0	1153.0	66.0	1703.9	9.2	1153.0	66.0	14.5
11UCCF03_38	79	1.45	0.877	0.024	0.1049	0.0019	0.7415	640.0	13.0	643.0	11.0	642.0	22.0	643.0	11.0	0.5
11UCCF03_39	112.8	1.303	7.140	0.320	0.2980	0.0130	0.97404	2122.0	40.0	1684.0	63.0	2586.0	11.0	DISC	DISC	34.9
11UCCF03_40	195	2.41	2.626	0.038	0.2208	0.0026	0.96313	1307.0	11.0	1286.0	14.0	1344.0	11.0	1344.0	11.0	4.3
11UCCF03_41	243.1	1.8	0.738	0.007	0.0899	0.0008	0.080317	562.2	4.5	554.7	4.6	594.0	19.0	554.7	4.6	1.3
11UCCF03_42	281	1.741	3.977	0.060	0.2672	0.0038	0.91703	1629.0	12.0	1526.0	19.0	1761.0	10.0	1761.0	10.0	13.3
11UCCF03_43	52.9	0.5	0.771	0.013	0.0944	0.0015	0.3284	580.8	7.6	581.2	8.7	585.0	21.0	581.2	8.7	0.1
11UCCF03_44	131.7	0.819	0.091	0.004	0.0137	0.0002	0.032366	88.5	3.2	87.6	1.4	230.0	50.0	87.6	1.4	1.0

11UCCF03_45	135.4	1.115	0.592	0.006	0.0754	0.0006	0.40966	472.2	3.9	468.8	3.7	483.0	13.0	468.8	3.7	0.7
11UCCF03_46	399	1.131	0.780	0.016	0.0894	0.0018	0.5381	584.9	9.2	552.0	11.0	697.0	24.0	552.0	11.0	5.6
11UCCF03_47	39.63	0.764	3.886	0.038	0.2797	0.0031	0.39419	1610.2	7.9	1590.0	16.0	1647.0	12.0	1647.0	12.0	3.5
11UCCF03_48	1247	1.035	1.950	0.071	0.1464	0.0040	0.71567	1100.0	23.0	880.0	22.0	1537.0	37.0	880.0	22.0	20.0
11UCCF03_49	274	0.757	0.103	0.003	0.0147	0.0002	0.27144	99.5	2.3	94.0	1.3	259.0	40.0	94.0	1.3	5.5
11UCCF03_50	364	2.75	3.460	0.110	0.2374	0.0080	0.96164	1514.0	26.0	1372.0	42.0	1731.0	11.0	1731.0	11.0	20.7
11UCCF03_51	144	1.095	4.659	0.057	0.3101	0.0048	0.79933	1759.0	10.0	1741.0	23.0	1795.5	7.7	1795.5	7.7	3.0
11UCCF03_52	145.7	1.291	4.538	0.039	0.3086	0.0027	0.75648	1737.6	7.2	1736.0	14.0	1741.5	6.6	1741.5	6.6	0.3
11UCCF03_53	119	0.942	2.137	0.033	0.1944	0.0028	0.66378	1161.0	11.0	1145.0	15.0	1179.0	14.0	1145.0	15.0	1.4
11UCCF03_54	114.7	1.0374	3.854	0.026	0.2777	0.0017	0.64931	1605.2	5.5	1579.9	8.3	1633.8	6.8	1633.8	6.8	3.3
11UCCF03_55	755	2.12	0.093	0.013	0.0128	0.0009	0.95777	89.0	11.0	82.1	5.4	171.0	59.0	82.1	5.4	7.8
11UCCF03_56	184	1.333	4.370	0.290	0.1927	0.0061	0.72599	1704.0	55.0	1142.0	31.0	2470.0	68.0	DISC	DISC	33.0
11UCCF03_57	231	0.846	0.095	0.002	0.0144	0.0002	0.30913	91.6	2.0	92.1	1.3	142.0	25.0	92.1	1.3	0.5
11UCCF03_59	272	1.518	0.097	0.002	0.0147	0.0002	0.18728	93.6	1.9	93.8	1.1	140.0	23.0	93.8	1.1	0.2
11UCCF03_60	180.7	0.978	0.096	0.003	0.0145	0.0002	0.20213	92.5	2.5	92.8	1.3	176.0	28.0	92.8	1.3	0.3
11UCCF03_61	92.2	0.62	5.106	0.035	0.3276	0.0021	0.63547	1836.8	5.9	1827.0	10.0	1849.9	6.4	1849.9	6.4	1.2
11UCCF03_62	134	1.54	0.689	0.009	0.0850	0.0007	0.3729	531.6	5.2	525.9	4.2	558.0	15.0	525.9	4.2	1.1
11UCCF03_63	75.6	0.737	3.182	0.061	0.2470	0.0050	0.8885	1451.0	15.0	1422.0	26.0	1481.0	13.0	1481.0	13.0	4.0
11UCCF03_64	106	1.227	1.907	0.041	0.1763	0.0040	0.82835	1082.0	14.0	1046.0	22.0	1146.0	17.0	1046.0	22.0	3.3
11UCCF03_65	305	1.971	2.230	0.016	0.1977	0.0016	0.72793	1190.9	4.9	1162.7	8.7	1240.7	6.8	1162.7	8.7	2.4
11UCCF03_66	134.9	0.92	3.272	0.025	0.2528	0.0023	0.64725	1474.2	5.9	1454.0	12.0	1503.1	7.5	1503.1	7.5	3.3
11UCCF03_67	290	1.69	4.700	0.140	0.2885	0.0073	0.95195	1761.0	25.0	1632.0	37.0	1931.0	12.0	1931.0	12.0	15.5
11UCCF03_68	124	2.67	1.699	0.016	0.1678	0.0016	0.57256	1008.5	6.0	1000.0	8.8	1030.0	14.0	1000.0	8.8	0.8
11UCCF03_69	26.4	1.26	1.654	0.031	0.1655	0.0019	0.07083	990.0	12.0	987.0	10.0	1010.0	25.0	987.0	10.0	0.3
11UCCF03_70	16.4	0.403	0.831	0.063	0.0425	0.0032	0.74167	611.0	36.0	268.0	20.0	2208.0	69.0	DISC	DISC	56.1
11UCCF03_71	400	10.4	1.510	0.230	0.1210	0.0160	0.9953	841.0	98.0	726.0	89.0	1180.0	95.0	726.0	89.0	13.7
11UCCF03_72	13.07	0.1886	11.250	0.190	0.4482	0.0079	0.50909	2547.0	15.0	2386.0	35.0	2673.0	16.0	2673.0	16.0	10.7
11UCCF03_73	161	1.641	0.210	0.005	0.0300	0.0004	0.23425	193.8	3.7	190.3	2.4	225.0	28.0	190.3	2.4	1.8
11UCCF03_74	85.6	1.231	2.424	0.026	0.2105	0.0026	0.55654	1249.2	7.7	1231.0	14.0	1268.0	10.0	1268.0	10.0	2.9
11UCCF03_75	66.7	0.5387	4.764	0.059	0.3124	0.0057	0.71332	1778.0	10.0	1752.0	28.0	1803.0	13.0	1803.0	13.0	2.8
11UCCF03_76	285.5	0.481	0.735	0.015	0.0843	0.0012	0.77082	559.8	8.8	521.8	7.3	706.0	22.0	521.8	7.3	6.8
11UCCF03_77	223.6	1.244	0.112	0.004	0.0154	0.0002	0.29819	107.9	3.2	98.4	1.2	341.0	54.0	98.4	1.2	8.8
11UCCF03_78	66.4	1.404	0.841	0.014	0.0995	0.0013	0.4393	619.3	7.8	611.7	7.5	663.0	23.0	611.7	7.5	1.2
11UCCF03_79	366.7	1.143	0.095	0.002	0.0144	0.0002	0.40407	92.2	1.9	91.9	1.5	164.0	28.0	91.9	1.5	0.3
11UCCF03_80	88	1.151	0.788	0.016	0.0930	0.0010	0.039311	589.3	8.8	573.4	6.0	613.0	32.0	573.4	6.0	2.7

11UCCF03_81	126.5	1.501	6.060	0.071	0.3612	0.0050	0.61922	1984.0	10.0	1991.0	24.0	1961.4	8.2	1961.4	8.2	1.5
11UCCF03_82	671	1.49	3.600	0.170	0.2194	0.0099	0.99466	1547.0	38.0	1275.0	53.0	1933.5	7.6	DISC	DISC	34.1
11UCCF03_83	214	2.306	0.853	0.009	0.1014	0.0009	0.3963	626.8	5.2	622.3	5.0	647.0	16.0	622.3	5.0	0.7
11UCCF03_84	196	3.48	4.902	0.061	0.3168	0.0040	0.9843	1797.0	13.0	1773.0	20.0	1834.2	6.9	1834.2	6.9	3.3
11UCCF03_85	352	3.39	2.992	0.070	0.2385	0.0045	0.98104	1403.0	19.0	1378.0	24.0	1450.0	12.0	1450.0	12.0	5.0
11UCCF03_87	133.9	1.374	2.001	0.021	0.1879	0.0025	0.59242	1115.6	7.1	1110.0	13.0	1121.0	14.0	1110.0	13.0	0.5
11UCCF03_88	93	0.742	7.740	0.280	0.3825	0.0059	0.74604	2195.0	30.0	2092.0	26.0	2298.0	35.0	2298.0	35.0	9.0
11UCCF03_89	331	1.338	0.277	0.007	0.0391	0.0009	0.8477	248.1	5.4	247.4	5.3	256.0	18.0	247.4	5.3	0.3
11UCCF03_91	285	1.864	2.336	0.023	0.2073	0.0024	0.70795	1222.8	7.0	1216.0	12.0	1229.4	9.5	1229.4	9.5	1.1
11UCCF03_92	223	1.7	0.095	0.003	0.0148	0.0003	0.33604	92.6	2.4	94.4	1.7	153.0	25.0	94.4	1.7	1.9
11UCCF03_93	355	0.926	0.130	0.006	0.0160	0.0003	0.10455	123.8	5.4	102.3	1.8	595.0	98.0	102.3	1.8	17.4
11UCCF03_94	547	1.3	0.091	0.006	0.0131	0.0007	0.85986	87.7	5.2	84.1	4.3	217.0	39.0	84.1	4.3	4.1
11UCCF03_95	4.05	3.86	16.010	0.740	0.1750	0.0077	0.74319	2862.0	45.0	1037.0	42.0	4617.0	28.0	DISC	DISC	63.8
11UCCF03_96	30.68	0.593	11.140	0.140	0.4834	0.0063	0.73209	2536.0	11.0	2541.0	27.0	2530.7	9.7	2530.7	9.7	0.4
11UCCF03_97	399	1.006	0.101	0.004	0.0152	0.0003	0.63367	97.9	3.2	97.5	2.0	207.0	30.0	97.5	2.0	0.4
11UCCF03_98	401	2.02	1.980	0.140	0.1787	0.0031	0.44127	1113.0	50.0	1060.0	17.0	1239.0	90.0	1060.0	17.0	4.8
11UCCF03_100	243	1.665	4.820	0.031	0.3199	0.0021	0.66872	1789.1	5.5	1789.0	10.0	1791.1	5.6	1791.1	5.6	0.1
11UCCF03_101	234.9	2.146	5.628	0.054	0.3438	0.0029	0.71598	1919.9	8.3	1905.0	14.0	1938.5	8.0	1938.5	8.0	1.7
11UCCF03_102	818	8.35	1.780	0.140	0.1237	0.0094	0.99526	1030.0	54.0	747.0	54.0	1690.9	9.8	747.0	54.0	27.5
11UCCF03_103	297	1.137	0.094	0.003	0.0139	0.0004	0.73818	90.8	2.3	88.9	2.3	253.0	34.0	88.9	2.3	2.1
11UCCF03_104	167	0.916	4.182	0.048	0.2934	0.0038	0.69342	1671.4	9.2	1658.0	19.0	1684.0	10.0	1684.0	10.0	1.5
11UCCF03_105	164	1.416	0.680	0.009	0.0836	0.0010	0.64838	526.5	5.2	517.3	5.8	574.0	18.0	517.3	5.8	1.7
11UCCF03_106	287	1.36	0.523	0.007	0.0671	0.0007	0.52402	427.0	4.4	418.8	4.0	480.0	20.0	418.8	4.0	1.9
11UCCF03_107	144.9	2.14	4.659	0.049	0.3098	0.0030	0.6704	1759.4	8.7	1739.0	15.0	1774.0	10.0	1774.0	10.0	2.0
11UCCF03_108	73.5	1.082	0.764	0.012	0.0927	0.0012	0.27372	576.9	7.1	571.3	6.9	621.0	22.0	571.3	6.9	1.0
11UCCF03_109	51.5	1.023	2.619	0.033	0.2190	0.0023	0.58577	1305.3	9.3	1276.0	12.0	1359.0	13.0	1359.0	13.0	6.1
11UCCF03_110	410	1.921	0.336	0.007	0.0469	0.0007	0.81177	293.7	5.0	295.4	4.4	290.0	15.0	295.4	4.4	0.6
11UCCF03_111	221.5	0.628	2.813	0.022	0.2346	0.0019	0.61368	1359.4	5.7	1358.5	9.7	1357.1	8.6	1357.1	8.6	0.1
11UCCF03_112	162.7	1.263	0.589	0.007	0.0762	0.0007	0.38532	470.1	4.5	473.2	4.0	465.0	13.0	473.2	4.0	0.7
11UCCF03_113	61.4	0.782	0.114	0.005	0.0150	0.0003	0.30987	109.4	4.9	95.8	2.1	485.0	68.0	95.8	2.1	12.4
11UCCF03_114	320	1.319	0.093	0.002	0.0141	0.0002	0.57389	89.9	1.9	90.2	1.3	163.0	20.0	90.2	1.3	0.3
11UCCF03_115	626	1.64	0.088	0.004	0.0131	0.0005	0.90813	85.3	3.4	83.7	3.3	155.0	20.0	83.7	3.3	1.9
11UCCF03_116	180.9	0.89	11.370	0.140	0.4578	0.0058	0.84394	2557.0	11.0	2429.0	26.0	2650.8	8.4	2650.8	8.4	8.4
11UCCF03_118	94.9	1.057	3.426	0.029	0.2650	0.0025	0.62251	1510.8	6.6	1515.0	13.0	1497.7	9.1	1497.7	9.1	1.2
11UCCF03_119	58.5	1.978	3.683	0.044	0.2770	0.0035	0.54618	1568.7	9.8	1576.0	18.0	1561.0	16.0	1561.0	16.0	1.0

11UCCF03_120	75.1	2.107	1.976	0.021	0.1869	0.0016	0.27524	1106.8	7.3	1104.4	8.9	1122.0	16.0	1104.4	8.9	0.2
11UCCF03_121	98.9	1.74	5.064	0.088	0.3443	0.0050	0.66085	1832.0	14.0	1907.0	24.0	1746.0	15.0	1746.0	15.0	9.2
11UCCF03_122	211	1.107	0.096	0.003	0.0142	0.0002	0.099443	92.8	2.3	91.1	1.2	194.0	39.0	91.1	1.2	1.8
11UCCF03_123	690	2.08	0.088	0.005	0.0135	0.0007	0.91764	85.7	4.4	86.3	4.6	115.0	16.0	86.3	4.6	0.7
Emery_1	188.4	0.669	4.876	0.055	0.3091	0.0038	0.71269	1797.4	9.5	1736.0	19.0	1847.0	16.0	1847.0	16.0	6.0
Emery_2	338	1.725	0.101	0.003	0.0154	0.0003	0.048166	97.6	3.0	98.6	1.7	111.0	72.0	98.6	1.7	1.0
Emery_3	123.6	2.56	2.889	0.080	0.2180	0.0056	0.8005	1380.0	22.0	1270.0	29.0	1555.0	37.0	1555.0	37.0	18.3
Emery_4	255.9	2.855	2.672	0.028	0.2277	0.0022	0.50022	1322.4	7.5	1322.0	12.0	1318.0	17.0	1318.0	17.0	0.3
Emery_5	279	3.73	4.761	0.071	0.3154	0.0054	0.77487	1777.0	12.0	1766.0	27.0	1784.0	22.0	1784.0	22.0	1.0
Emery_6	175.3	0.947	4.051	0.044	0.2902	0.0033	0.66193	1645.7	8.7	1642.0	17.0	1645.0	16.0	1645.0	16.0	0.2
Emery_7	246	2.219	0.209	0.006	0.0296	0.0004	0.0058373	192.5	5.3	188.2	2.5	251.0	71.0	188.2	2.5	2.2
Emery_8	1280	5.1	0.445	0.022	0.0516	0.0027	0.83443	376.0	15.0	324.0	17.0	637.0	60.0	324.0	17.0	13.8
Emery_8	427	0.798	0.877	0.013	0.1053	0.0019	0.76379	639.1	7.0	645.0	11.0	597.0	34.0	645.0	11.0	0.9
Emery_9	184.3	1.287	0.841	0.016	0.0995	0.0015	0.53795	619.0	8.7	611.2	8.9	654.0	35.0	611.2	8.9	1.3
Emery_10	131.7	1.32	3.875	0.047	0.2795	0.0032	0.55578	1607.7	9.9	1589.0	16.0	1637.0	22.0	1637.0	22.0	2.9
Emery_11	74.4	1.679	0.507	0.019	0.0670	0.0015	0.14948	420.0	11.0	417.9	8.8	410.0	86.0	417.9	8.8	0.5
Emery_12	137.5	1.714	0.123	0.005	0.0186	0.0005	0.010778	117.6	4.8	118.7	2.9	88.0	99.0	118.7	2.9	0.9
Emery_13	430	1.493	0.091	0.003	0.0141	0.0002	0.10842	88.6	2.6	90.1	1.5	45.0	63.0	90.1	1.5	1.7
Emery_14	167.1	0.8918	1.743	0.024	0.1719	0.0024	0.32891	1024.0	9.0	1022.0	13.0	1043.0	30.0	1043.0	30.0	2.0
Emery_15	145.2	1.2	2.921	0.059	0.2101	0.0045	0.6473	1386.0	15.0	1229.0	24.0	1632.0	32.0	1632.0	32.0	24.7
Emery_16	131.9	1.278	3.918	0.050	0.2800	0.0038	0.71854	1618.0	10.0	1591.0	19.0	1644.0	18.0	1644.0	18.0	3.2
Emery_17	122	2.121	2.151	0.041	0.1969	0.0039	0.29614	1165.0	13.0	1158.0	21.0	1141.0	45.0	1141.0	45.0	1.5
Emery_18	151.8	1.332	4.586	0.055	0.3170	0.0043	0.61067	1746.0	10.0	1775.0	21.0	1725.0	21.0	1725.0	21.0	2.9
Emery_19	63.7	1.825	3.687	0.068	0.2587	0.0034	0.65644	1569.0	14.0	1483.0	18.0	1675.0	29.0	1675.0	29.0	11.5
Emery_20	272	3.46	0.998	0.015	0.1153	0.0017	0.54494	702.2	7.6	703.3	9.6	723.0	30.0	703.3	9.6	0.2
Emery_21	590	10.98	5.675	0.075	0.3420	0.0041	0.79478	1927.0	11.0	1896.0	20.0	1972.0	15.0	1972.0	15.0	3.9
Emery_23	573	1.469	0.100	0.003	0.0150	0.0003	0.33656	96.9	3.0	96.1	2.0	98.0	55.0	96.1	2.0	0.8
Emery_24	296	2.02	5.678	0.087	0.3434	0.0060	0.7648	1927.0	13.0	1902.0	29.0	1958.0	21.0	1958.0	21.0	2.9
Emery_25	68.4	2.27	2.155	0.062	0.1876	0.0031	0.67918	1163.0	20.0	1108.0	17.0	1263.0	59.0	1263.0	59.0	12.3
Emery_26	877	2.78	1.836	0.016	0.1785	0.0019	0.65057	1058.8	6.0	1059.0	10.0	1056.0	20.0	1056.0	20.0	0.3
Emery_27	434	1.741	0.103	0.004	0.0153	0.0003	0.43134	99.3	3.2	98.1	1.8	187.0	66.0	98.1	1.8	1.2
Emery_28	156	0.67	0.769	0.016	0.0913	0.0014	0.26043	578.7	9.4	562.9	8.1	667.0	55.0	562.9	8.1	2.7
Emery_29	585	1.611	0.098	0.003	0.0142	0.0003	0.37992	95.2	2.7	91.1	1.8	198.0	65.0	91.1	1.8	4.3

Emery_30	235	1.304	0.105	0.003	0.0157	0.0003	0.21006	101.2	2.8	100.5	1.7	136.0	67.0	100.5	1.7	0.7
Emery_32	417	0.93	1.415	0.016	0.1454	0.0020	0.65813	896.1	6.5	875.0	11.0	929.0	20.0	929.0	20.0	5.8
Emery_33	38.2	3.03	1.960	0.061	0.1772	0.0047	0.38266	1103.0	22.0	1051.0	26.0	1172.0	70.0	1172.0	70.0	10.3
Emery_34	110.5	0.752	1.916	0.051	0.1445	0.0033	0.73205	1087.0	17.0	869.0	19.0	1540.0	33.0	DISC	DISC	43.6
Emery_35	286	5	3.051	0.033	0.2441	0.0029	0.68212	1419.8	8.2	1407.0	15.0	1429.0	18.0	1429.0	18.0	1.5
Emery_37	47.7	1.222	4.843	0.062	0.3210	0.0046	0.52142	1791.0	11.0	1794.0	22.0	1796.0	25.0	1796.0	25.0	0.1
Emery_38	70.9	0.989	3.877	0.057	0.2799	0.0045	0.38824	1609.0	11.0	1590.0	23.0	1645.0	33.0	1645.0	33.0	3.3
Emery_40	336	4.12	6.552	0.058	0.3654	0.0044	0.57727	2054.3	7.9	2007.0	21.0	2110.0	17.0	2110.0	17.0	4.9
Emery_41	260	2.502	1.375	0.019	0.1406	0.0017	0.48144	877.7	8.2	847.9	9.4	954.0	26.0	847.9	9.4	3.4
Emery_42	24.8	0.663	13.260	0.230	0.5100	0.0100	0.67364	2696.0	16.0	2654.0	43.0	2718.0	23.0	2718.0	23.0	2.4
Emery_43	182	2.849	4.724	0.041	0.3125	0.0025	0.57719	1771.8	7.4	1753.0	12.0	1791.0	14.0	1791.0	14.0	2.1
Emery_44	488	9.25	1.495	0.027	0.1506	0.0026	0.63832	930.0	12.0	904.0	15.0	981.0	33.0	981.0	33.0	7.8
Emery_45	127.4	1.9	0.797	0.015	0.0963	0.0014	0.21266	594.5	8.5	592.3	8.2	600.0	44.0	592.3	8.2	0.4
Emery_46	364	2.27	1.999	0.021	0.1856	0.0022	0.54337	1114.6	7.0	1097.0	12.0	1151.0	25.0	1151.0	25.0	4.7
Emery_47	181	1.264	3.961	0.066	0.2829	0.0051	0.69857	1624.0	13.0	1605.0	25.0	1653.0	22.0	1653.0	22.0	2.9
Emery_48	166.7	0.947	4.184	0.091	0.2773	0.0055	0.85388	1669.0	18.0	1577.0	28.0	1801.0	31.0	1801.0	31.0	12.4
Emery_49	219.4	0.935	3.776	0.052	0.2702	0.0036	0.67573	1587.0	11.0	1541.0	18.0	1642.0	22.0	1642.0	22.0	6.2
Emery_50	365	2.69	2.447	0.039	0.2151	0.0038	0.62068	1255.0	12.0	1256.0	20.0	1266.0	29.0	1266.0	29.0	0.8
Emery_51	777	1.515	0.852	0.008	0.0971	0.0011	0.55529	625.5	4.3	597.2	6.4	723.0	20.0	597.2	6.4	4.5
Emery_52	311	1.769	0.101	0.004	0.0147	0.0004	0.25171	97.3	3.3	93.8	2.5	183.0	75.0	93.8	2.5	3.6
Emery_53	102.5	0.838	2.387	0.040	0.2119	0.0027	0.57478	1241.0	11.0	1239.0	15.0	1255.0	28.0	1255.0	28.0	1.3
Emery_54	398.4	0.971	0.101	0.003	0.0150	0.0003	0.18624	97.6	2.8	96.1	1.6	154.0	63.0	96.1	1.6	1.5
Emery_55	168	1.833	0.817	0.010	0.0991	0.0012	0.44728	606.6	5.5	609.0	6.8	586.0	27.0	609.0	6.8	0.4
Emery_56	55.9	1.169	2.871	0.051	0.2256	0.0038	0.5119	1374.0	13.0	1311.0	20.0	1483.0	30.0	1483.0	30.0	11.6
Emery_57	1404	1.829	0.161	0.026	0.0166	0.0003	0.75422	148.0	21.0	106.4	2.2	610.0	200.0	106.4	2.2	28.1
Emery_58	449	2.64	4.169	0.055	0.2803	0.0040	0.8964	1670.0	11.0	1595.0	21.0	1764.0	11.0	1764.0	11.0	9.6
Emery_59	288	2.487	3.285	0.040	0.2550	0.0035	0.78592	1476.5	9.5	1464.0	18.0	1493.0	18.0	1493.0	18.0	1.9
Emery_60	132	2.723	1.635	0.084	0.1616	0.0086	0.64033	982.0	33.0	965.0	48.0	1022.0	92.0	1022.0	92.0	5.6
Emery_60	56.2	1.27	2.949	0.080	0.2367	0.0062	0.42063	1392.0	20.0	1369.0	33.0	1439.0	44.0	1439.0	44.0	4.9
Emery_61	186	3.29	0.685	0.015	0.0838	0.0013	0.45861	529.3	8.9	518.6	7.8	562.0	47.0	518.6	7.8	2.0
Emery_62	246.5	0.75	0.817	0.010	0.0979	0.0009	0.10875	606.2	5.6	601.7	5.4	627.0	32.0	601.7	5.4	0.7
Emery_63	223.4	1.273	0.112	0.005	0.0160	0.0004	0.17261	107.7	4.4	102.4	2.3	217.0	92.0	102.4	2.3	4.9
Emery_65	280	2.32	0.515	0.012	0.0671	0.0011	0.57014	421.3	7.8	419.6	6.8	452.0	47.0	419.6	6.8	0.4
Emery_66	635	7.34	0.819	0.011	0.0975	0.0012	0.6253	608.1	5.8	599.9	6.9	611.0	23.0	599.9	6.9	1.3
Emery_67	518	1.851	0.522	0.009	0.0677	0.0011	0.64681	426.0	6.0	422.2	6.8	441.0	32.0	422.2	6.8	0.9

Emery_68	181.7	2.009	3.834	0.052	0.2770	0.0047	0.77262	1599.0	11.0	1575.0	23.0	1627.0	22.0	1627.0	22.0	3.2
Emery_69	852	2.196	1.591	0.048	0.1558	0.0043	0.7216	966.0	19.0	933.0	24.0	1033.0	38.0	1033.0	38.0	9.7
Emery_69	337	1.919	1.740	0.033	0.1704	0.0046	0.70549	1023.0	12.0	1014.0	25.0	1027.0	37.0	1027.0	37.0	1.3
Emery_70	104.9	1.86	12.530	0.140	0.5002	0.0069	0.76211	2644.0	11.0	2613.0	30.0	2662.0	14.0	2662.0	14.0	1.8
Emery_71	135	2.506	2.883	0.042	0.2300	0.0033	0.61181	1377.0	11.0	1337.0	18.0	1436.0	23.0	1436.0	23.0	6.9
Emery_72	364	3.35	0.713	0.013	0.0881	0.0016	0.65606	546.0	7.9	544.3	9.3	573.0	28.0	544.3	9.3	0.3
Emery_73	190	2.569	4.645	0.057	0.3068	0.0045	0.69209	1758.0	10.0	1724.0	22.0	1786.0	18.0	1786.0	18.0	3.5
Emery_74	454	1.258	0.101	0.004	0.0151	0.0006	0.53104	97.9	3.6	96.5	4.0	278.0	83.0	96.5	4.0	1.4
Emery_75	151	2.53	6.013	0.069	0.3586	0.0042	0.73716	1976.8	9.9	1975.0	20.0	1981.0	14.0	1981.0	14.0	0.3
Emery_76	110.7	1.024	0.165	0.007	0.0249	0.0007	0.27895	155.1	6.1	158.3	4.1	101.0	90.0	158.3	4.1	2.1
Emery_77	259.7	2.35	14.720	0.210	0.5101	0.0072	0.86744	2799.0	13.0	2656.0	31.0	2888.0	12.0	2888.0	12.0	8.0
Emery_78	46.9	0.718	0.644	0.023	0.0818	0.0021	0.25447	503.0	14.0	506.0	13.0	502.0	84.0	506.0	13.0	0.6
Emery_79	372	3.148	1.559	0.029	0.1510	0.0031	0.59347	953.0	12.0	906.0	17.0	1070.0	32.0	1070.0	32.0	15.3
Emery_80	400	20.19	0.543	0.022	0.0704	0.0024	0.72124	440.0	14.0	438.0	14.0	435.0	73.0	438.0	14.0	0.5
Emery_81	677	1.32	0.106	0.003	0.0159	0.0003	0.55529	102.1	2.8	101.4	1.8	156.0	63.0	101.4	1.8	0.7
Emery_82	438	3.22	4.709	0.071	0.3060	0.0069	0.69709	1769.0	12.0	1719.0	34.0	1809.0	26.0	1809.0	26.0	5.0
Emery_83	180	2.09	3.973	0.051	0.2866	0.0045	0.60753	1628.0	11.0	1624.0	22.0	1628.0	24.0	1628.0	24.0	0.2
Emery_84	136	1.96	3.087	0.074	0.1770	0.0049	0.74255	1428.0	18.0	1057.0	27.0	2027.0	37.0	DISC	DISC	47.9
Emery_85	540	2.269	0.172	0.005	0.0263	0.0007	0.46995	161.1	4.0	167.2	4.4	109.0	60.0	167.2	4.4	3.8
Emery_86	1430	2.685	0.112	0.003	0.0159	0.0003	0.64581	107.7	2.5	101.8	2.1	223.0	41.0	101.8	2.1	5.5
Emery_87	173	1.603	3.261	0.067	0.2076	0.0038	0.82941	1470.0	16.0	1216.0	20.0	1869.0	19.0	DISC	DISC	34.9
Emery_88	1164	14.19	13.350	0.180	0.5113	0.0081	0.67474	2703.0	13.0	2666.0	33.0	2734.0	22.0	2734.0	22.0	2.5
Emery_89	231.4	2.567	2.707	0.044	0.2305	0.0036	0.69712	1329.0	12.0	1337.0	19.0	1329.0	23.0	1329.0	23.0	0.6
Emery_90	832	2.43	0.503	0.011	0.0630	0.0014	0.85832	413.6	7.2	393.8	8.4	541.0	30.0	393.8	8.4	4.8
Emery_91	114.6	1.005	0.098	0.006	0.0144	0.0005	0.099217	94.2	5.7	91.8	3.0	140.0	130.0	91.8	3.0	2.5
Emery_92	166	2.184	1.777	0.026	0.1755	0.0027	0.51652	1037.4	9.2	1042.0	15.0	1028.0	28.0	1028.0	28.0	1.4
Emery_93	291	1.646	3.663	0.072	0.2602	0.0053	0.75315	1561.0	16.0	1493.0	28.0	1657.0	29.0	1657.0	29.0	9.9
Emery_94	552	17.2	1.776	0.056	0.1736	0.0057	0.51994	1036.0	21.0	1032.0	31.0	1022.0	69.0	1022.0	69.0	1.0
Emery_101	100.7	3.04	1.976	0.080	0.1635	0.0052	0.97602	972.0	29.0	954.0	29.0	1086.0	28.0	1086.0	28.0	12.2
Emery_94	187.4	2.233	2.426	0.048	0.2019	0.0034	0.66512	1249.0	14.0	1185.0	18.0	1347.0	30.0	1347.0	30.0	12.0
Emery_95	119.1	0.912	3.950	0.069	0.2777	0.0063	0.70312	1622.0	14.0	1578.0	32.0	1670.0	35.0	1670.0	35.0	5.5
Emery_96	103.6	3.99	0.116	0.007	0.0173	0.0005	0.10087	110.6	6.0	110.3	2.9	130.0	120.0	110.3	2.9	0.3
Emery_97	236	4.22	4.604	0.069	0.3168	0.0056	0.72053	1749.0	12.0	1773.0	27.0	1737.0	23.0	1737.0	23.0	2.1
Emery_98	97.5	1.819	1.682	0.043	0.1655	0.0041	0.57271	1001.0	16.0	987.0	23.0	1037.0	50.0	1037.0	50.0	4.8
Emery_99	607	1.68	0.555	0.010	0.0698	0.0012	0.52362	448.8	6.6	435.1	7.3	487.0	39.0	435.1	7.3	3.1

Emery_100	187.4	1.4	3.547	0.073	0.2644	0.0063	0.63223	1535.0	17.0	1511.0	32.0	1575.0	34.0	1575.0	34.0	4.1
Emery_101	132.2	2.54	3.857	0.057	0.2780	0.0032	0.59093	1605.0	12.0	1581.0	16.0	1636.0	24.0	1636.0	24.0	3.4
Emery_102	76.7	2.863	2.043	0.040	0.1898	0.0027	0.27377	1129.0	13.0	1120.0	15.0	1130.0	41.0	1130.0	41.0	0.9
Emery_103	555	1.373	0.522	0.009	0.0678	0.0013	0.56367	426.4	5.8	422.7	7.6	451.0	40.0	422.7	7.6	0.9
Emery_104	439	1.1	3.995	0.061	0.2830	0.0047	0.48936	1632.0	12.0	1606.0	24.0	1673.0	17.0	1673.0	17.0	4.0
Emery_105	80.6	1.842	1.491	0.035	0.1510	0.0024	0.4123	925.0	14.0	907.0	14.0	973.0	47.0	973.0	47.0	6.8
Emery_106	38.4	2.61	3.179	0.071	0.2481	0.0044	0.39338	1454.0	16.0	1428.0	22.0	1470.0	42.0	1470.0	42.0	2.9
Emery_107	420	36	0.515	0.015	0.0652	0.0032	0.81112	422.0	10.0	407.0	20.0	524.0	77.0	407.0	20.0	3.6
Emery_107	397	2.067	0.934	0.022	0.1043	0.0023	0.68625	669.0	12.0	639.0	14.0	789.0	39.0	639.0	14.0	4.5
Emery_108	382	1.44	3.281	0.080	0.2411	0.0052	0.86887	1478.0	20.0	1392.0	27.0	1579.0	25.0	1579.0	25.0	11.8
Emery_109	184	0.928	4.349	0.054	0.3030	0.0046	0.60901	1702.0	10.0	1705.0	23.0	1675.0	21.0	1675.0	21.0	1.8
Emery_110	194	1.789	0.376	0.008	0.0499	0.0008	0.17743	323.6	6.0	314.1	4.8	395.0	51.0	314.1	4.8	2.9
Emery_111	189	1.96	3.460	0.078	0.2563	0.0053	0.83379	1516.0	18.0	1470.0	27.0	1584.0	22.0	1584.0	22.0	7.2
Emery_112	735	1.85	0.483	0.008	0.0628	0.0011	0.61916	399.5	5.4	392.6	6.5	429.0	27.0	392.6	6.5	1.7
Emery_113	99	2.393	7.880	0.220	0.2985	0.0088	0.87801	2214.0	25.0	1682.0	44.0	2751.0	26.0	DISC	DISC	38.9
Emery_114	263	1.459	0.093	0.005	0.0138	0.0003	0.11675	89.8	4.5	88.6	1.7	150.0	110.0	88.6	1.7	1.3
Emery_116	137	0.945	0.429	0.011	0.0561	0.0012	0.45486	363.1	8.2	351.6	7.3	392.0	61.0	351.6	7.3	3.2
Emery_117	726	4.72	3.618	0.051	0.2528	0.0037	0.80484	1553.0	11.0	1453.0	19.0	1695.0	21.0	1695.0	21.0	14.3
Emery_118	429	1.174	0.690	0.058	0.0797	0.0012	0.6031	518.0	25.0	494.0	7.4	570.0	83.0	494.0	7.4	4.6
Emery_119	224	1.974	4.388	0.049	0.3017	0.0033	0.74139	1709.3	9.3	1699.0	17.0	1727.0	14.0	1727.0	14.0	1.6
11UCCF04_1	473	2.35	3.313	0.053	0.2432	0.0036	0.92781	1484.0	12.0	1403.0	19.0	1611.8	5.4	1611.8	5.4	13.0
11UCCF04_2	145	1.325	0.101	0.004	0.0153	0.0003	0.24224	97.8	3.5	97.8	2.0	231.0	37.0	97.8	2.0	0.0
11UCCF04_3	62.3	1.442	1.590	0.022	0.1631	0.0023	0.45606	966.9	8.3	974.0	13.0	953.0	16.0	974.0	13.0	0.7
11UCCF04_4	80.9	2.09	0.733	0.012	0.0889	0.0010	0.18736	557.8	7.1	548.9	5.6	568.0	26.0	548.9	5.6	1.6
11UCCF04_5	60.8	0.87	2.874	0.045	0.2364	0.0023	0.36376	1374.0	12.0	1368.0	12.0	1383.0	18.0	1383.0	18.0	1.1
11UCCF04_6	86.3	1.556	4.874	0.064	0.3216	0.0049	0.95066	1797.0	11.0	1791.0	26.0	1799.0	10.0	1799.0	10.0	0.4
11UCCF04_7	168.7	1.016	0.114	0.004	0.0172	0.0004	0.10993	109.5	3.5	109.6	2.4	220.0	41.0	109.6	2.4	0.1
11UCCF04_8	383	1.168	0.097	0.002	0.0142	0.0002	0.28637	93.7	2.2	90.8	1.2	212.0	34.0	90.8	1.2	3.1
11UCCF04_9	759	1.527	0.097	0.002	0.0147	0.0002	0.3736	94.0	1.4	94.0	1.0	138.0	19.0	94.0	1.0	0.0
11UCCF04_10	7.27	0.1468	6.220	0.300	0.0741	0.0038	0.7152	1999.0	44.0	460.0	23.0	4527.0	34.0	DISC	DISC	77.0
11UCCF04_12	247.1	1.985	0.093	0.003	0.0138	0.0002	0.20214	90.2	2.5	88.4	1.3	213.0	36.0	88.4	1.3	2.0
11UCCF04_13	91.5	1.013	0.093	0.004	0.0145	0.0003	0.046879	90.6	3.5	92.7	1.8	213.0	40.0	92.7	1.8	2.3
11UCCF04_14	122	1.451	8.790	0.150	0.3761	0.0058	0.90638	2316.0	15.0	2057.0	27.0	2558.1	6.4	2558.1	6.4	19.6

11UCCF04_15	174	1.126	0.112	0.007	0.0145	0.0003	0.271	107.2	6.0	92.6	2.1	630.0	120.0	92.6	2.1	13.6
11UCCF04_17	507	1.475	0.093	0.002	0.0136	0.0002	0.69718	90.2	2.1	87.3	1.1	184.0	23.0	87.3	1.1	3.2
11UCCF04_19	206	3.58	0.511	0.007	0.0663	0.0008	0.48574	419.0	4.8	413.7	4.6	436.0	17.0	413.7	4.6	1.3
11UCCF04_20	524	1.529	0.093	0.002	0.0139	0.0002	0.61442	90.1	1.9	88.8	1.3	157.0	21.0	88.8	1.3	1.4
11UCCF04_21	328	0.958	0.111	0.008	0.0146	0.0002	0.75755	106.4	6.9	93.2	1.5	375.0	74.0	93.2	1.5	12.4
11UCCF04_23	484	1.594	0.092	0.002	0.0138	0.0002	0.35263	89.2	2.1	88.1	1.3	196.0	36.0	88.1	1.3	1.2
11UCCF04_25	37.6	1.206	2.548	0.057	0.2031	0.0028	0.074387	1280.0	14.0	1191.0	15.0	1422.0	23.0	1191.0	15.0	7.0
11UCCF04_26	122.8	0.488	0.245	0.005	0.0354	0.0005	0.22446	222.4	4.2	224.5	2.8	223.0	30.0	224.5	2.8	0.9
11UCCF04_27	338	1.373	0.103	0.002	0.0153	0.0002	0.31331	99.7	2.2	98.0	1.3	171.0	27.0	98.0	1.3	1.7
11UCCF04_28	369	1.56	0.092	0.003	0.0140	0.0003	0.66872	89.3	2.5	89.7	1.8	164.0	28.0	89.7	1.8	0.4
11UCCF04_29	93.9	2.12	2.282	0.036	0.2014	0.0026	0.72657	1206.0	11.0	1183.0	14.0	1247.0	11.0	1183.0	14.0	1.9
11UCCF04_31	394	2.64	1.690	0.013	0.1665	0.0013	0.73328	1005.3	5.0	992.7	7.1	1032.8	6.9	992.7	7.1	1.3
11UCCF04_32	450	1.517	2.983	0.024	0.2399	0.0020	0.82042	1402.8	6.3	1386.0	10.0	1417.6	8.1	1417.6	8.1	2.2
11UCCF04_33	216.1	1.335	0.096	0.003	0.0143	0.0002	0.11591	93.7	2.4	91.6	1.3	193.0	28.0	91.6	1.3	2.2
11UCCF04_34	205	1.347	0.104	0.005	0.0145	0.0004	0.38409	99.9	4.7	92.8	2.2	344.0	43.0	92.8	2.2	7.1
11UCCF04_35	563	0.858	0.100	0.002	0.0146	0.0002	0.4578	96.9	2.0	93.3	1.1	202.0	23.0	93.3	1.1	3.7
11UCCF04_36	412	1.283	0.101	0.004	0.0141	0.0003	0.78168	97.6	3.5	90.5	2.1	285.0	40.0	90.5	2.1	7.3
11UCCF04_37	46.5	1.195	15.140	0.130	0.5393	0.0054	0.53134	2824.2	7.9	2780.0	23.0	2850.7	8.3	2850.7	8.3	2.5
11UCCF04_38	222	2.01	5.620	0.510	0.2640	0.0170	0.97672	1864.0	81.0	1501.0	88.0	2326.0	62.0	DISC	DISC	35.5
11UCCF04_39	349	15.1	2.800	0.480	0.1670	0.0190	0.99734	1270.0	130.0	980.0	100.0	1670.0	150.0	980.0	100.0	22.8
11UCCF04_40	156	1.579	1.361	0.022	0.1395	0.0024	0.65498	871.3	9.7	843.0	14.0	951.0	17.0	843.0	14.0	3.2
11UCCF04_41	142.3	0.868	3.996	0.032	0.2859	0.0021	0.63099	1633.1	6.5	1621.0	10.0	1639.6	8.3	1639.6	8.3	1.1
11UCCF04_42	25	1.5	12.600	0.190	0.4945	0.0062	0.50538	2648.0	14.0	2589.0	27.0	2699.0	16.0	2699.0	16.0	4.1
11UCCF04_43	102.5	1.003	1.865	0.019	0.1805	0.0014	0.42615	1069.4	6.7	1069.7	7.5	1067.0	12.0	1069.7	7.5	0.0
11UCCF04_44	132.6	0.567	0.523	0.008	0.0676	0.0006	0.24575	427.4	5.3	421.9	3.7	461.0	18.0	421.9	3.7	1.3
11UCCF04_45	242	0.917	0.100	0.003	0.0147	0.0002	0.51237	96.3	2.9	94.0	1.5	262.0	40.0	94.0	1.5	2.4
11UCCF04_46	221	0.722	2.235	0.035	0.1901	0.0033	0.43794	1192.0	11.0	1121.0	18.0	1346.0	25.0	1121.0	18.0	6.0
11UCCF04_47	346	0.969	0.104	0.002	0.0159	0.0002	0.21876	101.1	1.9	101.5	1.3	172.0	25.0	101.5	1.3	0.4
11UCCF04_48	302	1.235	1.691	0.013	0.1674	0.0014	0.66445	1004.7	5.0	997.4	7.7	1019.0	9.0	997.4	7.7	0.7
11UCCF04_49	243	1.078	0.098	0.003	0.0140	0.0002	0.15687	94.9	2.7	89.8	1.5	245.0	41.0	89.8	1.5	5.4
11UCCF04_50	170	3.89	3.439	0.075	0.2484	0.0054	0.84575	1510.0	17.0	1429.0	28.0	1628.0	16.0	1628.0	16.0	12.2
11UCCF04_51	83	0.67	0.284	0.020	0.0388	0.0015	0.89971	252.0	15.0	245.2	9.3	369.0	65.0	245.2	9.3	2.7
11UCCF04_52	736	2.001	0.097	0.003	0.0139	0.0005	0.89988	93.7	3.1	89.0	3.1	238.0	29.0	89.0	3.1	5.0
11UCCF04_54	451	1.464	0.095	0.002	0.0138	0.0001	0.21196	92.2	1.7	88.6	0.9	212.0	26.0	88.6	0.9	3.9
11UCCF04_55	233	1.149	3.157	0.020	0.2520	0.0016	0.50627	1447.2	5.1	1448.6	8.5	1446.9	8.1	1446.9	8.1	0.1

11UCCF04_56	74.8	0.64	0.887	0.015	0.1037	0.0012	0.021498	644.0	8.1	635.9	7.0	703.0	27.0	635.9	7.0	1.3
11UCCF04_57	201	1.097	0.098	0.003	0.0146	0.0002	0.014909	94.9	2.8	93.6	1.3	205.0	31.0	93.6	1.3	1.4
11UCCF04_58	51	2.064	1.437	0.022	0.1479	0.0016	0.34115	903.8	9.2	888.9	8.9	970.0	19.0	888.9	8.9	1.6
11UCCF04_59	408	1.646	0.094	0.004	0.0145	0.0005	0.70486	92.0	3.7	93.1	3.3	276.0	42.0	93.1	3.3	1.2
11UCCF04_60	270.9	0.891	0.094	0.002	0.0142	0.0002	0.25888	91.8	1.7	90.7	1.1	161.0	29.0	90.7	1.1	1.2
11UCCF04_63	145.7	0.853	3.962	0.046	0.2840	0.0029	0.50164	1625.9	9.3	1611.0	14.0	1645.0	13.0	1645.0	13.0	2.1
11UCCF04_65	258.1	1.602	1.273	0.094	0.1024	0.0070	0.98966	825.0	44.0	626.0	42.0	1446.0	15.0	626.0	42.0	24.1
11UCCF04_66	24.6	1.282	3.219	0.051	0.2487	0.0043	0.23355	1461.0	12.0	1431.0	22.0	1526.0	19.0	1526.0	19.0	6.2
11UCCF04_67	149.3	0.546	0.976	0.014	0.1121	0.0012	0.40793	691.8	7.3	684.9	7.1	708.0	16.0	684.9	7.1	1.0
11UCCF04_68	175.3	1.015	2.310	0.022	0.2082	0.0016	0.36878	1215.0	6.8	1219.1	8.8	1219.0	11.0	1219.0	11.0	0.0
11UCCF04_69	260	1.221	0.105	0.004	0.0145	0.0002	0.21013	101.7	3.5	92.7	1.5	407.0	66.0	92.7	1.5	8.8
11UCCF04_70	184	2.15	0.115	0.006	0.0140	0.0002	0.24627	110.4	5.3	89.7	1.5	629.0	83.0	89.7	1.5	18.8
11UCCF04_72	438	1.029	0.091	0.004	0.0137	0.0004	0.87104	87.8	3.4	87.4	2.3	175.0	24.0	87.4	2.3	0.5
11UCCF04_73	177	3	6.190	0.090	0.3627	0.0055	0.873	2002.0	13.0	1994.0	26.0	2017.3	7.2	2017.3	7.2	1.2
11UCCF04_74	272	0.9	0.113	0.008	0.0148	0.0002	0.74752	108.4	7.1	94.8	1.5	349.0	83.0	94.8	1.5	12.5
11UCCF04_75	535	1.53	0.414	0.020	0.0518	0.0022	0.87753	352.0	14.0	326.0	14.0	572.0	26.0	326.0	14.0	7.4
11UCCF04_76	152	1.505	0.580	0.008	0.0742	0.0008	0.26958	464.1	5.0	461.3	4.6	493.0	20.0	461.3	4.6	0.6
11UCCF04_77	690	1.24	0.170	0.007	0.0225	0.0009	0.24658	162.2	5.5	143.4	5.7	408.0	73.0	143.4	5.7	11.6
11UCCF04_78	339	1.129	0.097	0.003	0.0148	0.0003	0.73093	94.1	2.7	94.8	2.0	165.0	30.0	94.8	2.0	0.7
11UCCF04_79	565	111	0.513	0.011	0.0664	0.0011	0.68414	420.1	7.2	414.7	6.5	467.0	22.0	414.7	6.5	1.3
11UCCF04_80	40.2	0.437	12.600	0.120	0.5026	0.0057	0.64237	2651.0	9.0	2624.0	24.0	2657.0	10.0	2657.0	10.0	1.2
11UCCF04_82	352	2.039	2.243	0.024	0.2032	0.0022	0.66853	1194.3	7.5	1192.0	12.0	1202.3	8.8	1192.0	12.0	0.2
11UCCF04_83	9.81	0.1518	8.750	0.440	0.0963	0.0053	0.85777	2300.0	44.0	591.0	31.0	4653.0	27.0	DISC	DISC	74.3
11UCCF04_85	14.82	0.883	2.047	0.055	0.1931	0.0043	0.1119	1129.0	18.0	1137.0	23.0	1112.0	38.0	1137.0	23.0	0.7
11UCCF04_86	213	1.026	0.094	0.003	0.0137	0.0003	0.12861	90.7	2.6	87.9	1.6	274.0	41.0	87.9	1.6	3.1
11UCCF04_87	116.3	1.83	1.614	0.028	0.1620	0.0026	0.5307	975.0	11.0	967.0	15.0	1002.0	21.0	967.0	15.0	0.8
11UCCF04_88	210	10.8	2.245	0.033	0.2012	0.0026	0.75229	1195.0	10.0	1182.0	14.0	1239.0	11.0	1182.0	14.0	1.1
11UCCF04_89	568	1.881	0.165	0.002	0.0240	0.0003	0.5875	154.7	2.1	153.0	1.8	208.0	15.0	153.0	1.8	1.1
11UCCF04_90	55.7	1.819	3.965	0.037	0.2856	0.0030	0.44091	1626.5	7.6	1619.0	15.0	1638.0	13.0	1638.0	13.0	1.2
11UCCF04_91	197	1.296	0.188	0.005	0.0275	0.0005	0.4323	174.9	3.9	174.9	3.1	234.0	34.0	174.9	3.1	0.0
11UCCF04_92	1430	1.62	0.243	0.025	0.0309	0.0038	0.98219	216.0	21.0	196.0	24.0	661.0	86.0	196.0	24.0	9.3
11UCCF04_93	458	1.188	0.094	0.002	0.0144	0.0001	0.24808	91.4	1.8	92.0	0.9	132.0	20.0	92.0	0.9	0.7
11UCCF04_94	212	0.86	0.095	0.002	0.0145	0.0002	0.083395	92.4	2.0	93.0	1.4	176.0	34.0	93.0	1.4	0.6
11UCCF04_95	282.1	0.943	0.107	0.005	0.0142	0.0002	0.051591	102.7	4.1	90.9	1.2	459.0	72.0	90.9	1.2	11.5
11UCCF04_96	185.3	0.89	0.818	0.010	0.0979	0.0009	0.48721	607.4	5.4	602.1	5.0	627.0	14.0	602.1	5.0	0.9

11UCCF04_97	192.8	1.497	3.310	0.030	0.2581	0.0019	0.83647	1483.1	7.0	1480.2	9.7	1490.1	8.8	1490.1	8.8	0.7
11UCCF04_98	311	1.298	0.097	0.002	0.0143	0.0002	0.16458	94.0	2.0	91.8	1.1	169.0	23.0	91.8	1.1	2.3
11UCCF04_99	243	1.107	0.749	0.026	0.0876	0.0012	0.68965	571.0	14.0	541.2	7.0	680.0	43.0	541.2	7.0	5.2
11UCCF04_100	157	2.99	1.481	0.042	0.1203	0.0031	0.16715	925.0	18.0	732.0	18.0	1394.0	72.0	732.0	18.0	20.9
11UCCF04_101	45.4	1.302	3.296	0.045	0.2570	0.0029	0.4225	1480.0	10.0	1474.0	15.0	1487.0	16.0	1487.0	16.0	0.9
11UCCF04_102	79.4	1.111	3.191	0.048	0.2438	0.0034	0.56933	1454.0	12.0	1406.0	18.0	1538.0	13.0	1538.0	13.0	8.6
11UCCF04_103	16.41	0.442	3.962	0.083	0.2732	0.0056	0.36067	1625.0	17.0	1556.0	28.0	1704.0	26.0	1704.0	26.0	8.7
11UCCF04_104	133.3	1.826	1.260	0.016	0.1358	0.0016	0.40675	827.4	7.3	820.8	9.1	851.0	14.0	820.8	9.1	0.8
11UCCF04_105	159	1.23	1.901	0.021	0.1751	0.0017	0.25768	1080.8	7.3	1040.2	9.3	1186.0	23.0	1040.2	9.3	3.8
11UCCF04_106	271	1.008	0.836	0.013	0.0996	0.0016	0.85231	617.8	7.7	612.1	9.3	649.0	17.0	612.1	9.3	0.9
11UCCF04_107	55.9	2.274	4.577	0.069	0.3040	0.0043	0.60617	1744.0	12.0	1710.0	21.0	1773.0	14.0	1773.0	14.0	3.6
11UCCF04_108	7.26	-143900	0.770	0.047	0.0858	0.0031	0.019614	572.0	25.0	530.0	19.0	769.0	72.0	530.0	19.0	7.3
11UCCF04_110	121.8	1.056	4.306	0.055	0.3026	0.0036	0.72921	1694.0	11.0	1704.0	18.0	1687.0	12.0	1687.0	12.0	1.0
11UCCF04_111	55.8	0.655	0.576	0.013	0.0714	0.0011	0.13509	461.5	8.4	444.6	6.5	551.0	30.0	444.6	6.5	3.7
11UCCF04_112	95.8	1.076	2.175	0.027	0.1953	0.0022	0.73371	1172.5	8.7	1150.0	12.0	1222.0	13.0	1150.0	12.0	1.9
11UCCF04_113	129	3.66	1.675	0.027	0.1660	0.0029	0.77431	1000.0	10.0	990.0	16.0	1023.0	11.0	990.0	16.0	1.0
11UCCF04_114	416	1.6	0.096	0.003	0.0137	0.0002	0.23356	93.2	2.7	87.8	1.1	257.0	45.0	87.8	1.1	5.8
11UCCF04_115	482	0.6641	0.249	0.015	0.0305	0.0021	0.95405	225.0	12.0	194.0	13.0	573.0	39.0	194.0	13.0	13.8
11UCCF04_116	94.5	0.845	3.824	0.048	0.2667	0.0030	0.64306	1597.0	10.0	1524.0	15.0	1700.2	8.5	1700.2	8.5	10.4
11UCCF04_118	431	1.565	0.102	0.004	0.0139	0.0002	0.18513	98.5	3.5	88.7	1.1	402.0	69.0	88.7	1.1	9.9
11UCCF04_119	74.4	1.16	4.118	0.051	0.2855	0.0027	0.53897	1659.0	11.0	1619.0	14.0	1723.0	12.0	1723.0	12.0	6.0
11UCCF04_120	34.2	0.5874	1.789	0.038	0.1702	0.0033	0.31576	1041.0	14.0	1017.0	18.0	1117.0	23.0	1017.0	18.0	2.3
11UCCF04_121	77.2	1.134	2.933	0.028	0.2370	0.0020	0.44281	1392.0	7.2	1371.0	10.0	1422.0	11.0	1422.0	11.0	3.6
11UCCF04_122	38.7	0.6332	3.822	0.045	0.2713	0.0033	0.40346	1598.2	9.3	1547.0	17.0	1669.0	13.0	1669.0	13.0	7.3
11UCCF04_123	479	1.342	0.093	0.002	0.0141	0.0002	0.23133	89.9	1.7	90.3	1.2	137.0	20.0	90.3	1.2	0.4
11UCCF05_3	20.34	1.439	2.260	0.046	0.2079	0.0033	0.2498	1202.0	14.0	1217.0	18.0	1186.0	27.0	1186.0	18.0	1.2
11UCCF05_4	179	2.11	2.420	0.040	0.1949	0.0033	0.85446	1251.0	12.0	1150.0	18.0	1428.0	10.0	1150.0	18.0	8.1
11UCCF05_7	231	1.538	0.533	0.017	0.0641	0.0022	0.86079	433.0	12.0	400.0	13.0	643.0	22.0	400.0	13.0	7.6
11UCCF05_8	528	1.856	0.093	0.003	0.0140	0.0004	0.66482	90.6	2.9	89.5	2.3	174.0	35.0	89.5	2.3	1.2
11UCCF05_9	367	1.103	0.460	0.010	0.0569	0.0016	0.80587	383.7	6.8	356.8	9.6	563.0	31.0	356.8	9.6	7.0
11UCCF05_11	148	2.21	4.983	0.061	0.3343	0.0038	0.68709	1816.0	10.0	1859.0	18.0	1776.8	8.9	1776.8	8.9	4.6
11UCCF05_12	392	1.826	0.100	0.003	0.0141	0.0002	0.16571	96.8	2.9	90.5	1.3	317.0	54.0	90.5	1.3	6.5

11UCCF05_13	64.2	0.4352	6.840	0.110	0.3823	0.0041	0.484	2090.0	15.0	2087.0	19.0	2090.0	12.0	2090.0	12.0	0.1
11UCCF05_14	76.6	0.604	1.690	0.430	0.1239	0.0042	0.97527	877.0	85.0	752.0	24.0	1130.0	180.0	752.0	24.0	14.3
11UCCF05_15	263.9	2.616	4.762	0.053	0.3124	0.0042	0.79538	1777.4	9.5	1752.0	21.0	1800.4	8.2	1800.4	8.2	2.7
11UCCF05_16	117.7	2.1	1.682	0.030	0.1579	0.0033	0.72762	1001.0	11.0	945.0	18.0	1128.0	18.0	945.0	18.0	5.6
11UCCF05_17	338	1.809	0.816	0.018	0.0886	0.0012	0.70995	606.5	9.9	547.2	7.3	810.0	22.0	547.2	7.3	9.8
11UCCF05_18	302	1.178	0.099	0.003	0.0147	0.0002	0.01779	95.4	2.4	93.8	1.4	227.0	35.0	93.8	1.4	1.7
11UCCF05_20	199	1.636	3.296	0.031	0.2566	0.0023	0.68332	1479.6	7.3	1472.0	12.0	1489.5	9.7	1489.5	9.7	1.2
11UCCF05_21	82.6	0.957	2.240	0.063	0.1981	0.0046	0.85064	1198.0	18.0	1165.0	25.0	1257.0	21.0	1165.0	25.0	2.8
11UCCF05_22	352.9	1.828	3.278	0.046	0.2574	0.0041	0.82122	1475.0	11.0	1476.0	21.0	1485.0	10.0	1485.0	10.0	0.6
11UCCF05_23	99.4	0.947	4.097	0.051	0.2909	0.0034	0.57289	1653.0	10.0	1645.0	17.0	1655.0	13.0	1655.0	13.0	0.6
11UCCF05_24	432	7.15	1.547	0.017	0.1564	0.0019	0.59361	949.1	6.6	937.0	10.0	978.0	12.0	937.0	10.0	1.3
11UCCF05_25	199.1	0.798	0.107	0.004	0.0150	0.0003	0.32869	102.8	3.2	96.0	1.8	311.0	39.0	96.0	1.8	6.6
11UCCF05_26	398	71.3	0.495	0.007	0.0640	0.0007	0.51965	408.6	4.5	399.7	4.3	476.0	14.0	399.7	4.3	2.2
11UCCF05_27	493	5.28	3.938	0.060	0.2482	0.0052	0.82796	1623.0	13.0	1429.0	27.0	1875.0	11.0	1875.0	11.0	23.8
11UCCF05_28	125.1	0.816	4.018	0.049	0.2833	0.0036	0.48804	1637.0	10.0	1607.0	18.0	1663.0	12.0	1663.0	12.0	3.4
11UCCF05_29	39	0.376	3.760	0.110	0.0633	0.0016	0.64798	1583.0	24.0	395.4	9.4	4054.0	24.0	DISC	DISC	75.0
11UCCF05_30	291.6	1.467	0.391	0.005	0.0528	0.0006	0.43776	334.9	3.9	331.4	3.6	367.0	19.0	331.4	3.6	1.0
11UCCF05_31	271	0.969	0.107	0.004	0.0144	0.0003	0.1809	103.4	3.9	92.3	1.6	408.0	53.0	92.3	1.6	10.7
11UCCF05_32	125	0.57	1.563	0.025	0.1601	0.0021	0.36959	956.6	9.7	957.0	12.0	956.0	20.0	957.0	12.0	0.0
11UCCF05_34	137	1.379	1.069	0.027	0.1160	0.0026	0.76499	738.0	13.0	707.0	15.0	847.0	18.0	707.0	15.0	4.2
11UCCF05_35	239	0.931	0.802	0.060	0.0669	0.0015	0.49996	588.0	32.0	417.2	9.0	1350.0	120.0	417.2	9.0	29.0
11UCCF05_37	347	8.36	0.462	0.006	0.0595	0.0009	0.40649	385.7	4.0	372.2	5.5	489.0	26.0	372.2	5.5	3.5
11UCCF05_38	58	0.86	3.842	0.047	0.2803	0.0037	0.57797	1602.1	9.6	1593.0	18.0	1634.0	14.0	1634.0	14.0	2.5
11UCCF05_39	77	0.852	6.051	0.073	0.3495	0.0063	0.64098	1983.0	11.0	1931.0	30.0	2038.0	12.0	2038.0	12.0	5.3
11UCCF05_40	176	1.094	1.907	0.072	0.1663	0.0020	0.61364	1078.0	24.0	991.0	11.0	1276.0	52.0	991.0	11.0	8.1
11UCCF05_41	244.5	1.052	0.106	0.010	0.0144	0.0003	0.43347	101.5	8.4	92.4	1.7	273.0	80.0	92.4	1.7	9.0
11UCCF05_42	61.1	0.58	13.040	0.120	0.5155	0.0048	0.54827	2682.0	8.8	2680.0	20.0	2699.0	7.8	2699.0	7.8	0.7
11UCCF05_43	428	2.259	0.238	0.006	0.0323	0.0008	0.74509	216.6	4.5	204.8	4.7	406.0	32.0	204.8	4.7	5.4
11UCCF05_44	195.7	0.935	0.098	0.003	0.0143	0.0003	0.17307	94.6	3.0	91.6	1.7	244.0	39.0	91.6	1.7	3.2
11UCCF05_45	614	1.253	0.094	0.002	0.0140	0.0003	0.31151	91.1	2.1	89.4	1.6	204.0	32.0	89.4	1.6	1.9
11UCCF05_46	94.08	0.681	3.805	0.043	0.2820	0.0025	0.38429	1594.9	9.4	1601.0	13.0	1602.0	12.0	1602.0	12.0	0.1
11UCCF05_47	292	1.782	0.106	0.003	0.0155	0.0002	0.29887	102.0	2.9	99.2	1.5	245.0	35.0	99.2	1.5	2.7
11UCCF05_49	271	0.945	2.806	0.028	0.2335	0.0024	0.76653	1356.7	7.5	1353.0	13.0	1374.4	8.4	1374.4	8.4	1.6
11UCCF05_50	3.64	-63000	5.030	0.220	0.3520	0.0110	0.4931	1827.0	38.0	1940.0	51.0	1758.0	48.0	1758.0	48.0	10.4
11UCCF05_51	728	1.232	0.168	0.003	0.0235	0.0004	0.86135	157.6	2.9	149.9	2.2	277.0	22.0	149.9	2.2	4.9

11UCCF05_52	386	1.595	0.213	0.032	0.0220	0.0022	0.98819	189.0	26.0	140.0	14.0	660.0	120.0	140.0	14.0	25.9
11UCCF05_53	256.4	1.601	0.101	0.003	0.0157	0.0002	0.16509	97.7	2.9	100.1	1.5	178.0	35.0	100.1	1.5	2.5
11UCCF05_54	521	1.444	0.094	0.003	0.0140	0.0003	0.90169	91.6	2.4	89.5	2.1	209.0	30.0	89.5	2.1	2.3
11UCCF05_55	256	3.952	5.960	0.120	0.3663	0.0052	0.90219	1968.0	17.0	2011.0	25.0	1930.4	9.7	1930.4	9.7	4.2
11UCCF05_56	262	1.241	0.138	0.005	0.0185	0.0004	0.54013	130.7	4.5	118.4	2.7	397.0	42.0	118.4	2.7	9.4
11UCCF05_57	310	2.115	4.438	0.045	0.3006	0.0035	0.71206	1718.7	8.5	1694.0	18.0	1763.6	9.1	1763.6	9.1	3.9
11UCCF05_58	61.3	1.363	2.178	0.035	0.1965	0.0021	0.25512	1173.0	11.0	1157.0	12.0	1205.0	18.0	1157.0	12.0	1.4
11UCCF05_59	51.4	1.109	1.821	0.036	0.1808	0.0029	0.4771	1053.0	13.0	1071.0	16.0	1062.0	25.0	1071.0	16.0	1.7
11UCCF05_60	378	2.079	0.503	0.008	0.0658	0.0010	0.71728	413.8	5.3	410.7	5.8	456.0	13.0	410.7	5.8	0.7
11UCCF05_61	114	0.622	3.794	0.040	0.2778	0.0024	0.67319	1590.7	8.5	1580.0	12.0	1615.1	9.7	1615.1	9.7	2.2
11UCCF05_62	373	2.62	1.554	0.038	0.1539	0.0028	0.9337	951.0	15.0	923.0	16.0	1029.0	17.0	923.0	16.0	2.9
11UCCF05_63	123.2	1.621	1.846	0.027	0.1786	0.0022	0.82417	1061.0	9.8	1059.0	12.0	1080.0	15.0	1059.0	12.0	0.2
11UCCF05_64	78.8	1.593	11.085	0.085	0.4814	0.0041	0.66445	2529.8	7.1	2533.0	18.0	2536.1	6.9	2536.1	6.9	0.1
11UCCF05_65	101.3	0.902	3.895	0.052	0.2860	0.0033	0.41218	1613.0	10.0	1621.0	17.0	1621.0	14.0	1621.0	14.0	0.0
11UCCF05_66	106.9	1.279	3.482	0.043	0.2629	0.0027	0.70188	1524.0	10.0	1504.0	14.0	1566.0	14.0	1566.0	14.0	4.0
11UCCF05_67	354	0.993	0.103	0.003	0.0153	0.0002	0.11268	99.5	2.3	97.6	1.4	205.0	28.0	97.6	1.4	1.9
11UCCF05_68	357	1.092	0.111	0.004	0.0163	0.0006	0.7703	106.9	3.8	104.0	3.8	219.0	26.0	104.0	3.8	2.7
11UCCF05_69	168.2	0.92	3.136	0.035	0.2499	0.0027	0.61787	1442.9	8.7	1438.0	14.0	1458.2	9.7	1458.2	9.7	1.4
11UCCF05_71	448	2.193	1.858	0.019	0.1771	0.0019	0.73053	1066.0	6.7	1051.0	10.0	1102.3	9.4	1051.0	10.0	1.4
11UCCF05_73	71.17	3.09	0.621	0.017	0.0704	0.0010	0.37041	492.0	11.0	438.4	6.2	770.0	37.0	438.4	6.2	10.9
11UCCF05_74	541	2.27	0.561	0.017	0.0625	0.0014	0.86584	452.0	11.0	390.8	8.2	756.0	23.0	390.8	8.2	13.5
11UCCF05_75	39.3	0.586	2.158	0.049	0.1878	0.0043	0.6913	1165.0	16.0	1111.0	23.0	1275.0	24.0	1111.0	23.0	4.6
11UCCF05_76	201.1	0.671	0.306	0.006	0.0418	0.0007	0.3737	270.6	4.7	264.0	4.1	363.0	26.0	264.0	4.1	2.4
11UCCF05_78	327	2.258	3.053	0.035	0.2265	0.0025	0.83435	1420.4	8.8	1316.0	13.0	1585.3	7.3	1585.3	7.3	17.0
11UCCF05_79	130.5	1.065	2.947	0.032	0.2462	0.0025	0.47562	1393.6	8.3	1419.0	13.0	1370.0	12.0	1370.0	12.0	3.6
11UCCF05_80	920	2.393	0.105	0.002	0.0156	0.0002	0.47253	101.3	1.6	99.7	1.2	166.0	21.0	99.7	1.2	1.6
11UCCF05_82	102	0.75	1.779	0.026	0.1747	0.0025	0.48355	1037.1	9.5	1038.0	14.0	1042.0	16.0	1038.0	14.0	0.1
11UCCF05_84	225.5	1.225	0.096	0.003	0.0146	0.0003	0.28483	92.7	2.9	93.1	2.1	242.0	47.0	93.1	2.1	0.4
11UCCF05_85	53.5	0.436	14.430	0.180	0.5411	0.0068	0.70076	2779.0	12.0	2787.0	28.0	2774.0	10.0	2774.0	10.0	0.5
11UCCF05_86	59.6	0.664	4.299	0.071	0.3094	0.0050	0.57386	1692.0	14.0	1737.0	24.0	1650.0	17.0	1650.0	17.0	5.3
11UCCF05_87	312	0.655	0.102	0.005	0.0149	0.0004	0.64233	98.7	4.4	95.0	2.3	304.0	57.0	95.0	2.3	3.7
11UCCF05_88	187.5	17.6	2.079	0.079	0.1920	0.0049	0.83954	1148.0	27.0	1131.0	26.0	1197.0	37.0	1131.0	26.0	1.5
11UCCF05_89	317	1.075	0.101	0.003	0.0147	0.0002	0.33986	97.4	2.4	94.3	1.3	225.0	31.0	94.3	1.3	3.2
11UCCF05_90	39.9	1.028	5.291	0.077	0.3400	0.0042	0.67718	1866.0	12.0	1886.0	20.0	1851.0	13.0	1851.0	13.0	1.9
11UCCF05_92	327	2.95	2.235	0.047	0.1986	0.0035	0.90238	1191.0	15.0	1167.0	19.0	1246.0	18.0	1167.0	19.0	2.0

11UCCF05_93	218	1.096	0.105	0.003	0.0152	0.0003	0.33396	101.5	2.9	97.1	1.7	239.0	36.0	97.1	1.7	4.3
11UCCF05_94	205	1.968	0.105	0.003	0.0145	0.0003	0.30724	101.3	3.2	92.8	1.8	347.0	38.0	92.8	1.8	8.4
11UCCF05_95	107	0.979	0.102	0.006	0.0147	0.0003	0.034744	98.2	5.0	93.9	2.2	392.0	79.0	93.9	2.2	4.4
11UCCF05_96	115.7	0.915	2.604	0.031	0.2245	0.0021	0.40829	1302.8	9.1	1306.0	11.0	1304.0	14.0	1304.0	14.0	0.2
11UCCF05_97	363	1.168	3.903	0.072	0.2772	0.0055	0.77812	1613.0	15.0	1581.0	27.0	1651.0	18.0	1651.0	18.0	4.2
11UCCF05_98	107	1.42	0.527	0.011	0.0684	0.0011	0.10263	430.3	7.8	426.5	6.8	462.0	29.0	426.5	6.8	0.9
11UCCF05_99	720	1.452	0.103	0.002	0.0147	0.0002	0.79332	99.4	1.9	93.8	1.4	232.0	25.0	93.8	1.4	5.6
11UCCF05_100	385	0.991	3.596	0.066	0.2482	0.0055	0.94586	1547.0	14.0	1428.0	28.0	1708.0	10.0	1708.0	10.0	16.4
11UCCF05_101	14.64	0.89	1.229	0.084	0.1072	0.0029	0.34811	794.0	32.0	656.0	17.0	1263.0	90.0	656.0	17.0	17.4
11UCCF05_102	863	7.88	0.524	0.022	0.0551	0.0015	0.88029	430.0	14.0	345.7	9.2	923.0	49.0	345.7	9.2	19.6
11UCCF05_103	242	0.7268	3.801	0.059	0.2710	0.0038	0.84329	1592.0	12.0	1546.0	19.0	1654.7	9.2	1654.7	9.2	6.6
11UCCF05_104	278.5	2.882	2.597	0.063	0.2036	0.0038	0.95036	1298.0	18.0	1194.0	21.0	1469.0	18.0	1194.0	21.0	8.0
11UCCF05_105	219	0.904	4.034	0.082	0.2809	0.0052	0.93504	1644.0	17.0	1595.0	26.0	1699.7	9.7	1699.7	9.7	6.2
11UCCF05_106	186	1.82	2.814	0.047	0.2323	0.0034	0.84923	1358.0	13.0	1346.0	18.0	1382.0	13.0	1382.0	13.0	2.6
11UCCF05_107	539	1.116	0.824	0.009	0.0969	0.0011	0.55404	610.5	5.2	595.9	6.5	662.0	14.0	595.9	6.5	2.4
11UCCF05_108	313	1.593	2.074	0.092	0.1332	0.0048	0.85256	1152.0	29.0	805.0	28.0	1851.0	34.0	DISC	DISC	30.1
11UCCF05_109	324	2.93	2.706	0.036	0.2017	0.0024	0.75625	1329.5	9.8	1184.0	13.0	1576.0	11.0	1184.0	13.0	10.9
11UCCF05_110	19.69	2.421	12.200	0.210	0.4950	0.0078	0.72504	2622.0	17.0	2590.0	34.0	2660.0	12.0	2660.0	12.0	2.6
11UCCF05_113	792	2.34	0.093	0.002	0.0139	0.0002	0.42598	90.0	1.7	89.1	1.2	151.0	24.0	89.1	1.2	1.0
11UCCF05_114	106.8	2.61	15.220	0.230	0.5455	0.0059	0.43273	2831.0	15.0	2806.0	24.0	2832.0	22.0	2832.0	22.0	0.9
11UCCF05_115	165.4	0.712	12.367	0.075	0.4897	0.0037	0.62181	2633.3	5.5	2569.0	16.0	2679.6	4.2	2679.6	4.2	4.1
11UCCF05_116	102	1.59	1.657	0.052	0.1627	0.0046	0.82747	999.0	21.0	975.0	25.0	1057.0	23.0	975.0	25.0	2.4
11UCCF05_117	202.8	1.017	0.100	0.003	0.0147	0.0002	0.2651	96.2	2.8	93.9	1.5	218.0	35.0	93.9	1.5	2.4
11UCCF05_118	135.2	1.317	2.077	0.021	0.1920	0.0018	0.36624	1140.7	7.0	1132.2	9.7	1150.0	12.0	1132.2	9.7	0.7
11UCCF05_119	218.2	1.78	0.734	0.012	0.0922	0.0012	0.45984	558.6	6.8	568.6	7.1	541.0	16.0	568.6	7.1	1.8
11UCCF05_120	502.5	3.012	3.337	0.043	0.2421	0.0035	0.87241	1489.0	10.0	1397.0	18.0	1627.0	9.8	1627.0	9.8	14.1

Table 2b: Sunnyside Canyon, UT

Sample Name:								**207/235**		**206/238**		**206/207**		**Best age**		
Grain #	**[U] ppm**	**U/Th**	**207/235**	**2σ error**	**206/238**	**2σ error**	**RHO**	**Age Ma**	**2σ error**	**Age (Ma)**	**2σ error**	**Age (Ma)**	**2σ error**	**(Ma)**	**2σ error**	**% Discordance***
11USS01_1	208	6.7	0.522	0.008	0.0686	0.0008	0.22721	426.3	5.1	428.4	5.2	438.0	20.0	428.4	5.2	0.5

11USS01_2	66.7	0.503	1.841	0.046	0.1468	0.0032	0.69736	1059.0	16.0	883.0	18.0	1461.0	30.0	883.0	18.0	16.6
11USS01_3	440	2.5	0.575	0.035	0.0725	0.0022	0.95608	452.0	16.0	451.0	13.0	475.0	48.0	451.0	13.0	0.2
11USS01_4	950	0.503	0.462	0.016	0.0611	0.0020	0.98242	385.0	12.0	382.0	12.0	431.0	25.0	382.0	12.0	0.8
11USS01_5	177.6	0.77	1.693	0.020	0.1603	0.0017	0.54677	1005.5	7.4	958.2	9.4	1115.0	13.0	958.2	9.4	4.7
11USS01_6	35.1	0.98	0.716	0.017	0.0882	0.0015	0.17512	547.0	10.0	546.1	8.7	541.0	29.0	546.1	8.7	0.2
11USS01_7	80.9	1.552	1.824	0.024	0.1785	0.0018	0.42526	1053.6	8.6	1058.4	9.7	1057.0	15.0	1058.4	9.7	0.5
11USS01_8	112.2	0.725	5.390	0.064	0.3448	0.0050	0.67182	1882.0	10.0	1909.0	24.0	1853.0	12.0	1853.0	12.0	3.0
11USS01_9	214	2.14	5.228	0.070	0.3314	0.0052	0.85861	1856.0	12.0	1848.0	26.0	1854.0	13.0	1854.0	13.0	0.3
11USS01_10	82.1	1.286	4.233	0.069	0.3005	0.0049	0.83222	1680.0	13.0	1694.0	24.0	1634.0	17.0	1634.0	17.0	3.7
11USS01_11	141.8	2.9	4.787	0.036	0.3157	0.0031	0.51981	1782.2	6.4	1768.0	15.0	1807.2	9.6	1807.2	9.6	2.2
11USS01_12	30.8	0.309	5.155	0.073	0.3357	0.0049	0.61126	1847.0	13.0	1865.0	24.0	1835.0	14.0	1835.0	14.0	1.6
11USS01_13	50.4	1.168	0.770	0.018	0.0919	0.0015	0.15608	580.0	10.0	566.5	9.1	618.0	37.0	566.5	9.1	2.3
11USS01_14	25.3	1.451	1.725	0.045	0.1627	0.0034	0.37232	1015.0	17.0	974.0	19.0	1144.0	34.0	974.0	19.0	4.0
11USS01_15	83.1	1.792	5.583	0.058	0.3480	0.0034	0.63012	1915.1	9.0	1925.0	16.0	1909.0	10.0	1909.0	10.0	0.8
11USS01_16	774	15.27	1.612	0.018	0.1592	0.0018	0.96194	974.4	6.8	952.0	10.0	1024.7	6.2	952.0	10.0	2.3
11USS01_17	840	1.63	0.092	0.005	0.0137	0.0006	0.92611	90.0	4.2	87.4	4.0	232.0	43.0	87.4	4.0	2.9
11USS01_18	321	1.037	4.547	0.039	0.3111	0.0026	0.73624	1739.2	7.2	1746.0	13.0	1731.5	6.7	1731.5	6.7	0.8
11USS01_19	360	3.65	1.737	0.019	0.1688	0.0019	0.81698	1021.8	7.3	1005.0	11.0	1066.3	9.9	1005.0	11.0	1.6
11USS01_20	146	1.54	2.000	0.037	0.1843	0.0033	0.79303	1117.0	13.0	1090.0	18.0	1159.0	18.0	1090.0	18.0	2.4
11USS01_21	81	1.506	4.006	0.047	0.2830	0.0032	0.62729	1634.7	9.5	1606.0	16.0	1655.5	9.5	1655.5	9.5	3.0
11USS01_22	575	1.308	0.097	0.002	0.0144	0.0002	0.22093	94.0	1.8	91.8	1.1	173.0	26.0	91.8	1.1	2.3
11USS01_23	194	0.972	0.533	0.010	0.0682	0.0007	0.1754	433.2	6.7	425.2	4.0	484.0	31.0	425.2	4.0	1.8
11USS01_24	209.6	2.146	4.400	0.034	0.3017	0.0025	0.72836	1712.8	6.6	1700.0	12.0	1729.4	6.9	1729.4	6.9	1.7
11USS01_25	438	1.595	0.546	0.006	0.0696	0.0006	0.57911	442.5	4.1	433.6	3.8	501.0	13.0	433.6	3.8	2.0
11USS01_26	37.3	1.09	1.974	0.037	0.1869	0.0025	0.22434	1105.0	13.0	1104.0	13.0	1102.0	24.0	1104.0	13.0	0.1
11USS01_27	213	1.1	3.610	0.110	0.2583	0.0067	0.83985	1553.0	24.0	1480.0	34.0	1652.0	20.0	1652.0	20.0	10.4
11USS01_28	145	1.136	3.953	0.044	0.2835	0.0034	0.76768	1623.7	9.1	1608.0	17.0	1627.3	9.9	1627.3	9.9	1.2
11USS01_29	327	1.124	0.095	0.003	0.0143	0.0002	0.33977	92.5	2.5	91.3	1.4	201.0	35.0	91.3	1.4	1.3
11USS01_30	76	1.88	1.858	0.029	0.1804	0.0025	0.53777	1065.0	10.0	1069.0	13.0	1058.0	15.0	1069.0	13.0	0.4
11USS01_31	130.9	0.849	1.973	0.023	0.1879	0.0017	0.63286	1105.7	7.8	1109.8	9.5	1116.0	10.0	1109.8	9.5	0.4
11USS01_32	153.2	1.469	1.776	0.019	0.1747	0.0014	0.50495	1036.3	6.8	1038.1	7.8	1031.0	12.0	1038.1	7.8	0.2
11USS01_33	103.6	1.364	0.516	0.011	0.0661	0.0010	0.1405	423.2	7.1	412.4	6.0	484.0	27.0	412.4	6.0	2.6
11USS01_34	218	1.679	2.352	0.023	0.2114	0.0021	0.79331	1227.6	7.0	1236.0	11.0	1219.6	7.5	1219.6	7.5	1.3
11USS01_35	166.6	2.238	0.099	0.004	0.0151	0.0002	0.19165	95.3	3.4	96.6	1.4	223.0	45.0	96.6	1.4	1.4
11USS01_36	91.8	0.87	4.834	0.032	0.3181	0.0020	0.37546	1791.3	5.6	1780.0	10.0	1812.5	8.8	1812.5	8.8	1.8

11USS01_37	608	1.48	0.282	0.096	0.0240	0.0012	0.96979	194.0	25.0	153.0	7.3	580.0	170.0	153.0	7.3	21.1
11USS01_38	99	1.034	12.810	0.100	0.5047	0.0053	0.58646	2665.5	7.7	2633.0	23.0	2700.2	7.4	2700.2	7.4	2.5
11USS01_39	68.9	1.625	1.694	0.024	0.1647	0.0018	0.39911	1005.4	9.0	982.5	9.9	1056.0	16.0	982.5	9.9	2.3
11USS01_40	70.4	1.684	5.000	0.061	0.3310	0.0037	0.37253	1818.0	10.0	1843.0	18.0	1801.0	14.0	1801.0	14.0	2.3
11USS01_41	26.3	0.838	1.763	0.038	0.1699	0.0035	0.21729	1030.0	14.0	1011.0	20.0	1068.0	28.0	1011.0	20.0	1.8
11USS01_42	146.6	0.811	4.255	0.036	0.2916	0.0025	0.62245	1684.3	7.0	1649.0	13.0	1733.4	8.7	1733.4	8.7	4.9
11USS01_43	162.1	1.399	1.792	0.020	0.1763	0.0013	0.34395	1042.2	7.4	1046.7	7.0	1041.0	13.0	1046.7	7.0	0.4
11USS01_44	58	1.367	2.037	0.027	0.1918	0.0020	0.23647	1128.1	9.2	1131.0	11.0	1119.0	16.0	1131.0	11.0	0.3
11USS01_45	341	0.936	1.870	0.051	0.1741	0.0039	0.95895	1073.0	18.0	1034.0	21.0	1152.0	15.0	1034.0	21.0	3.6
11USS01_46	49.9	0.87	0.571	0.015	0.0693	0.0011	0.083673	458.0	9.5	431.7	6.8	596.0	41.0	431.7	6.8	5.7
11USS01_47	712	0.838	0.090	0.003	0.0132	0.0003	0.64137	87.0	2.7	84.8	2.0	202.0	30.0	84.8	2.0	2.5
11USS01_48	704	0.827	0.267	0.007	0.0373	0.0009	0.95753	239.7	5.8	236.0	5.6	282.0	15.0	236.0	5.6	1.5
11USS01_49	276	3.81	0.510	0.018	0.0626	0.0021	0.90316	418.0	12.0	391.0	13.0	574.0	19.0	391.0	13.0	6.5
11USS01_50	71.5	0.629	3.266	0.043	0.2536	0.0027	0.45211	1472.0	10.0	1457.0	14.0	1513.0	16.0	1513.0	16.0	3.7
11USS01_51	142	1.258	3.085	0.026	0.2468	0.0019	0.37721	1428.6	6.5	1421.9	9.8	1445.0	12.0	1445.0	12.0	1.6
11USS01_52	253	1.91	3.878	0.043	0.2815	0.0029	0.76989	1609.5	8.8	1599.0	14.0	1633.5	7.9	1633.5	7.9	2.1
11USS01_53	521	2	0.372	0.007	0.0493	0.0012	0.86609	320.8	5.0	310.1	7.3	437.0	25.0	310.1	7.3	3.3
11USS01_54	84.6	1.654	0.810	0.190	0.0590	0.0017	0.95427	507.0	69.0	369.0	10.0	1040.0	240.0	369.0	10.0	27.2
11USS01_55	145.2	1.092	5.094	0.040	0.3288	0.0028	0.48642	1835.4	6.7	1832.0	14.0	1839.2	8.5	1839.2	8.5	0.4
11USS01_56	254	2.65	0.106	0.004	0.0145	0.0003	0.32197	102.4	3.8	92.9	1.9	396.0	59.0	92.9	1.9	9.3
11USS01_57	347	1.476	1.668	0.015	0.1672	0.0014	0.60428	996.8	5.4	996.3	7.9	997.0	8.1	996.3	7.9	0.1
11USS01_58	94.3	1.702	4.373	0.033	0.2994	0.0028	0.30412	1706.9	6.3	1688.0	14.0	1730.0	11.0	1730.0	11.0	2.4
11USS01_59	58	0.967	5.039	0.054	0.3166	0.0031	0.62617	1825.1	9.1	1773.0	15.0	1875.0	11.0	1875.0	11.0	5.4
11USS01_60	311.2	2.454	3.902	0.040	0.2805	0.0028	0.83339	1613.5	8.4	1594.0	14.0	1639.5	6.1	1639.5	6.1	2.8
11USS01_61	127.1	0.998	4.030	0.038	0.2876	0.0027	0.63731	1639.8	7.7	1629.0	14.0	1648.2	8.1	1648.2	8.1	1.2
11USS01_62	294	0.956	0.104	0.003	0.0151	0.0002	0.12621	100.6	2.7	96.5	1.5	241.0	38.0	96.5	1.5	4.1
11USS01_63	88.2	2.218	1.620	0.021	0.1622	0.0014	0.33229	978.4	8.2	969.1	7.7	1010.0	13.0	969.1	7.7	1.0
11USS01_64	114.5	1.107	4.517	0.048	0.3123	0.0032	0.70721	1734.4	8.7	1751.0	15.0	1731.7	8.3	1731.7	8.3	1.1
11USS01_65	65.33	0.378	0.891	0.019	0.1013	0.0014	0.15876	646.2	9.9	622.0	7.9	725.0	30.0	622.0	7.9	3.7
11USS01_66	167.8	2.368	1.677	0.028	0.1645	0.0017	0.043581	999.0	10.0	981.6	9.6	1027.0	20.0	981.6	9.6	1.7
11USS01_67	96.3	2.89	2.095	0.045	0.1967	0.0035	0.78673	1145.0	15.0	1157.0	19.0	1136.0	15.0	1157.0	19.0	1.0
11USS01_68	122.1	3.66	2.026	0.084	0.1812	0.0037	0.72932	1112.0	24.0	1073.0	20.0	1190.0	44.0	1073.0	20.0	3.5
11USS01_69	39.6	1.13	3.162	0.059	0.2504	0.0040	0.58378	1451.0	14.0	1440.0	21.0	1458.0	18.0	1458.0	18.0	1.2
11USS01_70	251	3.28	3.087	0.060	0.2483	0.0049	0.96685	1422.0	19.0	1429.0	26.0	1430.9	9.1	1430.9	9.1	0.1
11USS01_71	46.5	1.184	2.620	0.070	0.2271	0.0058	0.83792	1303.0	19.0	1318.0	30.0	1307.0	16.0	1307.0	16.0	0.8

11USS01_72	271	1.685	2.026	0.029	0.1793	0.0024	0.84351	1123.3	9.7	1063.0	13.0	1232.0	12.0	1063.0	13.0	5.4
11USS01_73	290	2.86	1.773	0.036	0.1714	0.0031	0.87227	1034.0	13.0	1021.0	17.0	1080.0	12.0	1021.0	17.0	1.3
11USS01_74	185.1	2.29	5.042	0.043	0.3293	0.0033	0.53255	1826.0	7.3	1835.0	16.0	1820.0	11.0	1820.0	11.0	0.8
11USS01_75	99	2.5	0.846	0.030	0.0983	0.0026	0.87499	623.0	16.0	604.0	15.0	665.0	33.0	604.0	15.0	3.0
11USS01_76	196	0.993	0.739	0.014	0.0902	0.0017	0.62018	561.1	8.0	556.0	10.0	578.0	18.0	556.0	10.0	0.9
11USS01_77	31.9	1.377	1.755	0.053	0.1748	0.0030	0.5587	1027.0	20.0	1038.0	17.0	1024.0	34.0	1038.0	17.0	1.1
11USS01_78	2080	4.23	0.111	0.009	0.0161	0.0013	0.9775	105.8	8.5	102.7	8.5	190.0	21.0	102.7	8.5	2.9
11USS01_79	410	3.43	0.129	0.029	0.0158	0.0020	0.99535	107.0	17.0	101.0	12.0	371.0	91.0	101.0	12.0	5.6
11USS01_80	230	1.968	3.830	0.120	0.2678	0.0091	0.97384	1592.0	27.0	1527.0	47.0	1699.0	10.0	1699.0	10.0	10.1
11USS01_81	133	1.032	2.046	0.029	0.1929	0.0026	0.46267	1130.1	9.7	1137.0	14.0	1129.0	14.0	1137.0	14.0	0.6
11USS01_82	276	1.31	2.185	0.029	0.2009	0.0025	0.97609	1175.6	9.2	1180.0	13.0	1167.0	12.0	1180.0	13.0	0.4
11USS01_83	186	5.78	13.530	0.140	0.5288	0.0058	0.74285	2716.3	9.6	2739.0	25.0	2699.2	7.5	2699.2	7.5	1.5
11USS01_84	68	1.015	0.544	0.015	0.0712	0.0013	0.19786	439.9	9.7	443.2	7.8	426.0	39.0	443.2	7.8	0.8
11USS01_85	313	0.546	0.646	0.026	0.0648	0.0009	0.39319	504.0	16.0	404.5	5.2	959.0	56.0	404.5	5.2	19.7
11USS01_86	74.9	0.805	13.530	0.170	0.5237	0.0069	0.73335	2717.0	12.0	2714.0	29.0	2717.0	11.0	2717.0	11.0	0.1
11USS01_87	350	1.185	0.101	0.003	0.0149	0.0002	0.29428	97.6	2.7	95.1	1.4	186.0	35.0	95.1	1.4	2.6
11USS01_88	94.9	1.011	3.895	0.073	0.2776	0.0059	0.82989	1612.0	15.0	1578.0	30.0	1661.2	8.8	1661.2	8.8	5.0
11USS01_89	270	3.55	2.818	0.034	0.2306	0.0023	0.792	1359.6	9.1	1337.0	12.0	1398.0	8.6	1398.0	8.6	4.4
11USS01_90	109.2	1.336	1.761	0.026	0.1718	0.0024	0.51576	1032.8	9.7	1022.0	13.0	1044.0	18.0	1022.0	13.0	1.0
11USS01_91	209	0.7649	12.420	0.140	0.4891	0.0055	0.86649	2638.0	11.0	2566.0	24.0	2695.9	6.4	2695.9	6.4	4.8
11USS01_92	243	2.58	4.484	0.098	0.3174	0.0065	0.87824	1729.0	18.0	1776.0	32.0	1688.0	11.0	1688.0	11.0	5.2
11USS01_93	585	1.354	0.094	0.002	0.0144	0.0003	0.48683	91.6	1.9	92.4	1.8	152.0	23.0	92.4	1.8	0.9
11USS01_94	79.6	1.04	4.088	0.043	0.2907	0.0023	0.17369	1651.2	8.6	1645.0	12.0	1669.0	15.0	1669.0	15.0	1.4
11USS01_95	129.6	0.863	0.109	0.005	0.0156	0.0003	0.086087	104.6	4.3	99.6	2.0	372.0	58.0	99.6	2.0	4.8
11USS01_96	234	1.336	2.801	0.026	0.2323	0.0020	0.54369	1356.0	6.9	1346.0	10.0	1370.1	9.5	1370.1	9.5	1.8
11USS01_97	55.6	1.109	2.102	0.046	0.1980	0.0037	0.34045	1148.0	15.0	1164.0	20.0	1120.0	27.0	1164.0	20.0	1.4
11USS01_98	179	0.817	0.473	0.010	0.0637	0.0010	0.39221	393.5	6.8	397.8	6.0	389.0	22.0	397.8	6.0	1.1
11USS01_99	162	1.075	1.893	0.021	0.1831	0.0019	0.56453	1078.0	7.4	1085.0	10.0	1071.0	12.0	1085.0	10.0	0.6
11USS01_100	302	2.71	1.674	0.019	0.1661	0.0012	0.50178	998.2	7.0	990.5	6.6	1012.0	10.0	990.5	6.6	0.8
11USS01_101	48.5	0.791	2.052	0.046	0.1909	0.0034	0.59155	1131.0	15.0	1126.0	18.0	1150.0	23.0	1126.0	18.0	0.4
11USS01_102	78.3	1.153	4.011	0.046	0.2875	0.0031	0.4022	1635.5	9.3	1630.0	16.0	1648.0	11.0	1648.0	11.0	1.1
11USS01_103	193	0.991	5.363	0.076	0.3311	0.0045	0.76504	1878.0	12.0	1843.0	22.0	1909.9	9.5	1909.9	9.5	3.5
11USS01_104	329	1.464	0.095	0.003	0.0139	0.0002	0.24982	92.0	2.6	89.0	1.4	222.0	35.0	89.0	1.4	3.3
11USS01_105	407	1.974	0.097	0.002	0.0144	0.0002	0.18073	94.4	2.3	92.3	1.4	198.0	25.0	92.3	1.4	2.2
11USS01_106	49.5	2.05	1.806	0.035	0.1731	0.0020	0.092231	1048.0	13.0	1029.0	11.0	1088.0	25.0	1029.0	11.0	1.8

11USS01_107	204	2.14	2.860	0.069	0.2374	0.0046	0.76817	1370.0	18.0	1373.0	24.0	1366.0	23.0	1366.0	23.0	0.5
11USS01_108	62	1.054	0.095	0.013	0.0143	0.0007	0.0015057	91.0	12.0	91.3	4.4	426.0	87.0	91.3	4.4	0.3
11USS01_109	108	2.165	4.872	0.048	0.3245	0.0032	0.64297	1796.8	8.4	1811.0	15.0	1784.0	9.0	1784.0	9.0	1.5
11USS01_110	99.9	0.4764	1.660	0.035	0.1662	0.0034	0.79633	995.0	14.0	991.0	19.0	1015.0	19.0	991.0	19.0	0.4
11USS01_111	68.2	0.473	1.756	0.030	0.1719	0.0025	0.82506	1028.0	11.0	1022.0	14.0	1038.0	16.0	1022.0	14.0	0.6
11USS01_112	186.2	0.82	3.178	0.053	0.2515	0.0038	0.89656	1450.0	13.0	1449.0	19.0	1455.0	14.0	1455.0	14.0	0.4
11USS01_113	304	1.782	4.463	0.039	0.3063	0.0025	0.71529	1723.7	7.3	1722.0	12.0	1723.5	7.0	1723.5	7.0	0.1
11USS01_114	139	1.94	3.321	0.043	0.2598	0.0033	0.89865	1485.0	10.0	1488.0	17.0	1488.0	8.4	1488.0	8.4	0.0
11USS01_115	95.9	1.244	3.252	0.052	0.2587	0.0030	0.6593	1470.0	13.0	1483.0	15.0	1456.0	14.0	1456.0	14.0	1.9
11USS01_116	112.3	0.8105	2.735	0.028	0.2315	0.0020	0.42548	1337.4	7.7	1342.0	10.0	1335.0	9.8	1335.0	9.8	0.5
11USS01_117	150.8	1.254	3.609	0.043	0.2732	0.0032	0.67804	1550.6	9.4	1557.0	16.0	1550.6	7.0	1550.6	7.0	0.4
11USS01_118	62	1.33	1.787	0.041	0.1777	0.0036	0.45519	1040.0	15.0	1054.0	20.0	1039.0	25.0	1054.0	20.0	1.3
11USS01_119	63.6	1.448	2.011	0.037	0.1925	0.0037	0.63656	1119.0	12.0	1135.0	20.0	1089.0	19.0	1135.0	20.0	1.4
11USS01_120	108.9	0.4246	2.356	0.026	0.2116	0.0020	0.3161	1228.8	7.8	1237.0	11.0	1220.0	13.0	1220.0	13.0	1.4
11USS01_121	89.3	1.292	2.118	0.022	0.1949	0.0018	0.30648	1156.2	7.0	1147.6	9.4	1172.0	14.0	1147.6	9.4	0.7
11USS01_122	459	1.86	0.102	0.002	0.0152	0.0002	0.32037	98.9	2.2	97.4	1.3	153.0	27.0	97.4	1.3	1.5
11USS02_1	80	2.83	3.610	0.051	0.2589	0.0036	0.42828	1550.0	11.0	1484.0	19.0	1631.0	14.0	1631.0	14.0	9.0
11USS02_2	121.1	0.709	4.425	0.073	0.2765	0.0052	0.83063	1719.0	14.0	1573.0	26.0	1885.6	9.9	1885.6	9.9	16.6
11USS02_3	199	1.81	0.103	0.005	0.0136	0.0004	0.91569	98.4	3.7	86.9	2.2	402.0	42.0	86.9	2.2	11.7
11USS02_4	95.7	1.122	1.384	0.051	0.1379	0.0046	0.86574	879.0	22.0	832.0	26.0	985.0	20.0	832.0	26.0	5.3
11USS02_5	327	4.07	1.619	0.015	0.1602	0.0015	0.84798	977.4	5.9	957.6	8.3	1015.0	10.0	957.6	8.3	2.0
11USS02_6	261	13.7	1.513	0.071	0.1481	0.0049	0.94772	936.0	29.0	890.0	28.0	1023.0	31.0	890.0	28.0	4.9
11USS02_7	55	2.005	1.754	0.078	0.1448	0.0039	0.17302	1021.0	28.0	871.0	22.0	1327.0	71.0	871.0	22.0	14.7
11USS02_8	183	2.662	4.083	0.036	0.2764	0.0024	0.84342	1650.4	7.2	1575.0	13.0	1742.5	6.6	1742.5	6.6	9.6
11USS02_9	89	1.138	3.186	0.036	0.2390	0.0027	0.64778	1454.1	8.7	1381.0	14.0	1562.0	9.0	1562.0	9.0	11.6
11USS02_10	169	2.75	3.998	0.063	0.2811	0.0053	0.66648	1632.0	13.0	1596.0	27.0	1700.0	14.0	1700.0	14.0	6.1
11USS02_11	72.9	1.493	2.606	0.053	0.2149	0.0037	0.77237	1301.0	15.0	1254.0	20.0	1392.0	16.0	1392.0	16.0	9.9
11USS02_12	12.19	1.257	1.323	0.045	0.1338	0.0038	0.15373	852.0	20.0	809.0	21.0	976.0	52.0	809.0	21.0	5.0
11USS02_13	204	2.194	0.101	0.005	0.0143	0.0005	0.65883	97.6	4.1	91.4	3.2	261.0	34.0	91.4	3.2	6.4
11USS02_14	324	5.47	4.575	0.097	0.2890	0.0050	0.81472	1744.0	18.0	1635.0	25.0	1885.0	12.0	1885.0	12.0	13.3
11USS02_15	1070	2.07	0.076	0.007	0.0112	0.0009	0.93554	74.3	6.4	71.4	5.8	203.0	36.0	71.4	5.8	3.9
11USS02_16	150.1	1.605	2.224	0.028	0.1989	0.0019	0.43953	1188.0	8.9	1170.0	10.0	1219.0	12.0	1170.0	10.0	1.5

11USS02_17	114.2	1.064	3.336	0.028	0.2569	0.0019	0.36923	1489.1	6.6	1474.0	9.5	1510.0	11.0	1510.0	11.0	2.4
11USS02_18	128	0.825	1.624	0.016	0.1632	0.0016	0.42281	979.1	6.1	974.3	9.0	1006.0	12.0	974.3	9.0	0.5
11USS02_19	81.4	0.986	4.210	0.050	0.2937	0.0032	0.60625	1675.1	9.8	1660.0	16.0	1706.0	10.0	1706.0	10.0	2.7
11USS02_20	56.7	0.8167	13.980	0.100	0.5256	0.0039	0.52234	2748.9	6.7	2723.0	16.0	2774.8	6.3	2774.8	6.3	1.9
11USS02_21	91.8	1.159	2.054	0.028	0.1930	0.0025	0.41879	1133.2	9.2	1139.0	14.0	1144.0	14.0	1139.0	14.0	0.5
11USS02_22	396	1.41	2.339	0.070	0.1851	0.0050	0.92995	1221.0	22.0	1094.0	27.0	1465.0	17.0	1094.0	27.0	10.4
11USS02_23	377	3.36	3.600	0.160	0.2490	0.0110	0.9555	1543.0	37.0	1429.0	57.0	1697.0	21.0	1697.0	21.0	15.8
11USS02_24	616	1.291	1.968	0.017	0.1810	0.0017	0.78008	1104.2	5.9	1073.6	9.6	1174.6	7.6	1073.6	9.6	2.8
11USS02_25	640	2.19	0.098	0.004	0.0142	0.0005	0.73741	95.2	3.4	90.8	2.9	277.0	36.0	90.8	2.9	4.6
11USS02_26	67.1	0.638	2.134	0.054	0.1862	0.0033	0.68305	1162.0	17.0	1103.0	18.0	1261.0	22.0	1103.0	18.0	5.1
11USS02_27	38	1.456	1.678	0.035	0.1684	0.0027	0.20633	998.0	13.0	1003.0	15.0	1008.0	23.0	1003.0	15.0	0.5
11USS02_28	140.4	1.476	2.023	0.027	0.1912	0.0019	0.89905	1122.4	9.3	1128.0	10.0	1134.0	12.0	1128.0	10.0	0.5
11USS02_29	245	0.704	3.953	0.030	0.2849	0.0027	0.59483	1626.0	6.5	1616.0	13.0	1649.4	9.5	1649.4	9.5	2.0
11USS02_30	22.65	0.429	12.580	0.170	0.4792	0.0096	0.64826	2648.0	13.0	2522.0	42.0	2760.0	11.0	2760.0	11.0	8.6
11USS02_31	326	1.78	0.529	0.007	0.0685	0.0005	0.27404	430.9	5.0	427.3	3.0	463.0	15.0	427.3	3.0	0.8
11USS02_32	402	0.985	3.751	0.045	0.2709	0.0030	0.84255	1582.7	9.9	1545.0	15.0	1635.5	7.5	1635.5	7.5	5.5
11USS02_33	58.5	0.849	4.088	0.042	0.2817	0.0028	0.34136	1651.3	8.4	1600.0	14.0	1732.0	15.0	1732.0	15.0	7.6
11USS02_34	60.1	1.128	3.283	0.039	0.2518	0.0027	0.36239	1476.2	9.3	1448.0	14.0	1527.0	14.0	1527.0	14.0	5.2
11USS02_35	43.7	0.738	13.550	0.100	0.5226	0.0050	0.60486	2718.4	7.3	2710.0	21.0	2732.0	9.1	2732.0	9.1	0.8
11USS02_36	237	1.415	2.903	0.026	0.2378	0.0018	0.62989	1383.2	6.8	1375.1	9.4	1403.5	7.1	1403.5	7.1	2.0
11USS02_37	187	2.249	4.571	0.033	0.3151	0.0022	0.6048	1745.1	6.0	1766.0	11.0	1733.0	5.9	1733.0	5.9	1.9
11USS02_38	37.55	1.611	0.587	0.016	0.0773	0.0013	0.018924	468.0	10.0	479.8	8.0	435.0	48.0	479.8	8.0	2.5
11USS02_39	100.9	0.682	0.600	0.011	0.0758	0.0011	0.12725	476.5	7.3	471.2	6.3	516.0	28.0	471.2	6.3	1.1
11USS02_40	107.4	1.266	0.450	0.010	0.0605	0.0008	0.27674	376.9	6.7	378.5	4.8	400.0	25.0	378.5	4.8	0.4
11USS02_41	272	3.78	0.498	0.007	0.0652	0.0007	0.25498	410.1	5.0	406.8	4.1	460.0	19.0	406.8	4.1	0.8
11USS02_42	245	2.77	4.398	0.040	0.3075	0.0024	0.94125	1710.0	7.9	1726.0	13.0	1698.0	5.8	1698.0	5.8	1.6
11USS02_43	174.9	1.93	3.294	0.045	0.2574	0.0039	0.84195	1479.0	11.0	1476.0	20.0	1492.0	11.0	1492.0	11.0	1.1
11USS02_44	132.4	1.38	3.897	0.034	0.2887	0.0028	0.59943	1612.6	7.1	1635.0	14.0	1590.5	9.7	1590.5	9.7	2.8
11USS02_45	156.3	0.526	13.265	0.095	0.5252	0.0042	0.6526	2698.3	6.7	2721.0	18.0	2684.4	6.4	2684.4	6.4	1.4
11USS02_46	22.33	0.442	1.383	0.034	0.1472	0.0025	0.29962	881.0	15.0	885.0	14.0	881.0	28.0	885.0	14.0	0.5
11USS02_47	30.6	1.348	3.420	0.063	0.2576	0.0034	0.49406	1508.0	14.0	1477.0	18.0	1564.0	17.0	1564.0	17.0	5.6
11USS02_48	172	1.156	2.257	0.028	0.2027	0.0022	0.589	1198.1	8.7	1190.0	12.0	1214.0	17.0	1190.0	12.0	0.7
11USS02_49	123	0.55	4.726	0.047	0.3221	0.0028	0.50067	1771.2	8.3	1800.0	13.0	1752.8	8.5	1752.8	8.5	2.7
11USS02_50	424	1.563	2.594	0.014	0.2245	0.0013	0.44031	1298.7	4.1	1305.5	6.8	1305.4	7.2	1305.4	7.2	0.0
11USS02_51	100.2	2.56	3.205	0.059	0.2549	0.0037	0.95257	1452.0	17.0	1463.0	19.0	1448.0	19.0	1448.0	19.0	1.0

11USS02_52	76.1	0.7849	4.564	0.086	0.2959	0.0030	0.48322	1740.0	15.0	1671.0	15.0	1832.0	31.0	1832.0	31.0	8.8
11USS02_53	151.3	1.4	7.009	0.055	0.3834	0.0035	0.70975	2112.2	6.9	2092.0	16.0	2140.2	6.9	2140.2	6.9	2.3
11USS02_54	307	1.216	2.179	0.026	0.1988	0.0021	0.8737	1173.7	8.3	1169.0	12.0	1181.0	10.0	1169.0	12.0	0.4
11USS02_55	166	2.1	2.780	0.096	0.2267	0.0051	0.92681	1343.0	28.0	1320.0	26.0	1406.0	32.0	1406.0	32.0	6.1
11USS02_56	270	0.726	4.283	0.032	0.2973	0.0020	0.53785	1689.7	6.1	1677.9	9.9	1715.5	7.9	1715.5	7.9	2.2
11USS02_57	155.4	1.244	1.272	0.027	0.1334	0.0023	0.894	832.0	12.0	807.0	13.0	901.0	14.0	807.0	13.0	3.0
11USS02_58	155.4	1.087	3.044	0.031	0.2421	0.0020	0.71005	1418.3	7.8	1398.0	10.0	1455.4	8.5	1455.4	8.5	3.9
11USS02_59	102.4	2.12	3.626	0.034	0.2644	0.0025	0.75379	1554.7	7.5	1514.0	13.0	1622.0	11.0	1622.0	11.0	6.7
11USS02_60	86.3	0.861	4.010	0.034	0.2936	0.0022	0.33974	1635.7	6.9	1659.0	11.0	1616.5	9.2	1616.5	9.2	2.6
11USS02_61	80.6	0.993	2.789	0.046	0.2278	0.0027	0.66191	1351.0	12.0	1323.0	14.0	1391.0	16.0	1391.0	16.0	4.9
11USS02_62	71.6	1.313	2.994	0.044	0.2410	0.0028	0.81506	1407.0	12.0	1392.0	15.0	1447.0	13.0	1447.0	13.0	3.8
11USS02_63	423	15.5	0.485	0.009	0.0636	0.0012	0.92051	401.4	6.3	397.1	7.3	423.0	19.0	397.1	7.3	1.1
11USS02_64	229	9.46	0.518	0.006	0.0679	0.0006	0.27803	423.9	4.2	423.5	3.5	442.0	18.0	423.5	3.5	0.1
11USS02_65	504	5.06	2.605	0.029	0.2227	0.0025	0.89512	1302.8	8.5	1296.0	13.0	1320.2	7.9	1320.2	7.9	1.8
11USS02_66	333.5	1.92	0.420	0.007	0.0562	0.0010	0.61016	356.1	4.8	352.2	6.4	400.0	24.0	352.2	6.4	1.1
11USS02_67	130.3	1.138	0.215	0.011	0.0287	0.0008	0.6969	198.0	8.6	182.4	4.8	414.0	54.0	182.4	4.8	7.9
11USS02_68	489	2.205	2.540	0.024	0.2184	0.0019	0.83913	1284.0	6.9	1273.4	9.9	1307.8	6.9	1307.8	6.9	2.6
11USS02_69	57	0.896	6.716	0.081	0.3864	0.0044	0.54581	2074.0	11.0	2108.0	20.0	2041.9	9.5	2041.9	9.5	3.2
11USS02_70	105.4	0.4474	1.382	0.016	0.1438	0.0014	0.17187	881.7	6.7	866.1	8.0	925.0	14.0	866.1	8.0	1.8
11USS02_71	174	1.882	2.007	0.021	0.1865	0.0021	0.6506	1118.3	7.4	1102.0	12.0	1155.0	10.0	1102.0	12.0	1.5
11USS02_72	261	1.208	0.094	0.003	0.0141	0.0002	0.33988	91.0	2.4	90.2	1.2	151.0	26.0	90.2	1.2	0.9
11USS02_73	447	1.09	0.541	0.015	0.0702	0.0012	0.95827	438.2	9.6	437.2	7.2	431.0	17.0	437.2	7.2	0.2
11USS02_74	31.8	0.602	14.490	0.260	0.5314	0.0084	0.96316	2772.0	23.0	2745.0	36.0	2807.0	13.0	2807.0	13.0	2.2
11USS02_75	314.2	21.6	0.520	0.008	0.0691	0.0009	0.4615	425.0	5.4	430.9	5.3	410.0	18.0	430.9	5.3	1.4
11USS02_76	349	2.18	1.939	0.037	0.1786	0.0029	0.74584	1095.0	13.0	1059.0	16.0	1152.0	19.0	1059.0	16.0	3.3
11USS02_77	90	0.79	2.073	0.030	0.1935	0.0034	0.49169	1138.9	9.9	1140.0	18.0	1137.0	22.0	1140.0	18.0	0.1
11USS02_78	434	2.13	2.403	0.019	0.2161	0.0018	0.64132	1243.1	5.5	1261.3	9.3	1214.2	7.9	1214.2	7.9	3.9
11USS02_79	86	0.932	2.065	0.029	0.1946	0.0023	0.47807	1136.4	9.6	1146.0	13.0	1116.0	15.0	1146.0	13.0	0.8
11USS02_80	82.1	1.852	1.817	0.039	0.1758	0.0042	0.54472	1053.0	13.0	1046.0	23.0	1054.0	24.0	1046.0	23.0	0.7
11USS02_81	65.5	0.365	3.000	0.240	0.2225	0.0036	0.7027	1355.0	39.0	1295.0	19.0	1530.0	100.0	1530.0	100.0	15.4
11USS02_82	113	1.423	0.097	0.004	0.0149	0.0004	0.09152	93.4	4.0	95.3	2.4	216.0	46.0	95.3	2.4	2.0
11USS02_83	569	1.353	0.097	0.003	0.0138	0.0002	0.087966	94.1	2.5	88.4	1.1	290.0	46.0	88.4	1.1	6.1
11USS02_84	172.6	2.242	6.287	0.041	0.3775	0.0025	0.67468	2016.3	5.7	2065.0	12.0	1979.5	6.0	1979.5	6.0	4.3
11USS02_85	83	1.161	3.512	0.055	0.2733	0.0039	0.71051	1528.0	12.0	1559.0	19.0	1485.0	13.0	1485.0	13.0	5.0

11USS02_86	277	0.98	2.702	0.030	0.2296	0.0019	0.55192	1328.5	8.2	1332.4	9.8	1321.0	11.0	1321.0	11.0	0.9
11USS02_87	113.1	0.78	27.520	0.320	0.6668	0.0070	0.66101	3402.0	12.0	3296.0	28.0	3464.2	6.8	3464.2	6.8	4.9
11USS02_88	118	0.971	1.791	0.022	0.1771	0.0019	0.22813	1043.8	8.5	1051.0	10.0	1034.0	17.0	1051.0	10.0	0.7
11USS02_89	156.1	0.2744	0.701	0.010	0.0874	0.0009	0.36649	539.0	5.7	540.0	5.3	565.0	21.0	540.0	5.3	0.2
11USS02_90	198	0.796	0.818	0.013	0.0983	0.0013	0.42066	606.5	7.1	604.1	7.8	638.0	19.0	604.1	7.8	0.4
11USS02_91	321	1.305	2.236	0.028	0.2039	0.0022	0.84217	1191.8	8.8	1196.0	12.0	1198.1	6.8	1196.0	12.0	0.4
11USS02_92	687	3.382	10.909	0.065	0.4817	0.0024	0.72209	2515.8	5.4	2534.0	11.0	2505.3	3.9	2505.3	3.9	1.1
11USS02_93	96.6	0.7786	5.225	0.045	0.3371	0.0024	0.29307	1857.1	7.2	1872.0	12.0	1837.7	9.7	1837.7	9.7	1.9
11USS02_94	220.8	1.985	0.828	0.012	0.1000	0.0014	0.50322	611.8	6.8	614.4	8.0	621.0	22.0	614.4	8.0	0.4
11USS02_95	65	2.05	2.516	0.071	0.2210	0.0044	0.77366	1278.0	20.0	1292.0	22.0	1255.0	23.0	1255.0	23.0	2.9
11USS02_96	738	1.39	0.092	0.002	0.0139	0.0002	0.51444	89.6	1.7	89.2	1.2	161.0	24.0	89.2	1.2	0.4
11USS02_97	426	2.239	1.692	0.015	0.1684	0.0013	0.653	1005.1	5.5	1003.5	6.9	1011.8	8.1	1003.5	6.9	0.2
11USS02_98	85.1	0.991	4.925	0.054	0.3288	0.0027	0.54922	1805.7	9.2	1832.0	13.0	1778.0	11.0	1778.0	11.0	3.0
11USS02_99	129.4	1.047	4.645	0.034	0.3095	0.0018	0.44159	1757.1	6.2	1738.2	8.9	1781.8	6.4	1781.8	6.4	2.4
11USS02_100	51.4	1.726	1.576	0.025	0.1629	0.0019	0.095721	961.0	10.0	973.0	10.0	948.0	26.0	973.0	10.0	1.2
11USS02_101	197	0.98	6.320	0.078	0.3647	0.0040	0.8938	2020.0	11.0	2007.0	20.0	2035.0	7.3	2035.0	7.3	1.4
11USS02_102	22.03	0.85	14.050	0.520	0.5270	0.0150	0.85779	2747.0	35.0	2724.0	64.0	2750.0	25.0	2750.0	25.0	0.9
11USS02_103	82.7	0.954	4.083	0.045	0.2928	0.0033	0.63701	1650.1	9.1	1655.0	16.0	1650.0	11.0	1650.0	11.0	0.3
11USS02_104	242	1.869	4.249	0.038	0.2934	0.0026	0.89914	1684.6	7.9	1658.0	13.0	1721.0	7.1	1721.0	7.1	3.7
11USS02_105	63.3	1.075	2.074	0.030	0.1930	0.0018	0.32064	1141.0	10.0	1137.2	9.7	1141.0	20.0	1137.2	9.7	0.3
11USS02_106	117	0.645	5.744	0.067	0.3491	0.0032	0.66713	1938.0	10.0	1930.0	15.0	1949.0	12.0	1949.0	12.0	1.0
11USS02_107	539	1.496	0.092	0.002	0.0141	0.0001	0.166	89.1	2.0	90.4	0.9	143.0	22.0	90.4	0.9	1.4
11USS02_108	334	1.74	0.485	0.006	0.0639	0.0005	0.78968	401.4	3.9	399.5	3.2	405.0	14.0	399.5	3.2	0.5
11USS02_109	32.3	0.523	0.582	0.022	0.0743	0.0014	0.068962	466.0	14.0	461.9	8.7	538.0	58.0	461.9	8.7	0.9
11USS02_110	90.8	0.703	4.075	0.033	0.2950	0.0024	0.50515	1648.9	6.6	1666.0	12.0	1634.5	8.2	1634.5	8.2	1.9
11USS02_111	243	2.16	2.174	0.048	0.1827	0.0039	0.86614	1172.0	15.0	1081.0	21.0	1357.0	15.0	1081.0	21.0	7.8
11USS02_112	129	1.164	0.711	0.010	0.0872	0.0008	0.31516	545.0	6.0	539.0	4.8	591.0	20.0	539.0	4.8	1.1
11USS02_113	22.85	0.735	0.587	0.026	0.0738	0.0018	0.2482	466.0	17.0	459.0	11.0	574.0	45.0	459.0	11.0	1.5
11USS02_114	51.2	1.444	1.981	0.036	0.1859	0.0026	0.16287	1109.0	13.0	1099.0	14.0	1145.0	22.0	1099.0	14.0	0.9
11USS02_115	121.9	0.966	2.163	0.021	0.2005	0.0015	0.29582	1168.9	6.9	1178.0	8.3	1149.0	13.0	1178.0	8.3	0.8
11USS02_116	11.82	1.231	2.630	0.100	0.2182	0.0056	0.37859	1303.0	29.0	1272.0	29.0	1348.0	41.0	1348.0	41.0	5.6
11USS02_117	169.4	1.737	2.539	0.028	0.2147	0.0021	0.48737	1282.7	8.0	1254.0	11.0	1330.0	11.0	1330.0	11.0	5.7
11USS02_118	341	1.172	0.093	0.003	0.0138	0.0002	0.014774	90.3	2.9	88.3	1.4	243.0	55.0	88.3	1.4	2.2
11USS02_119	153	1.112	1.625	0.019	0.1660	0.0015	0.2497	979.5	7.5	990.1	8.1	956.0	19.0	990.1	8.1	1.1

11USS02_120	48.2	0.722	0.710	0.017	0.0865	0.0014	0.14433	546.5	9.5	534.5	8.1	617.0	41.0	534.5	8.1	2.2
11USS04_1	244	1.93	0.535	0.011	0.0696	0.0010	0.2944	436.7	7.3	433.8	5.7	438.0	51.0	433.8	5.7	0.7
11USS04_2	175.3	2.91	1.757	0.027	0.1725	0.0025	0.54677	1032.0	10.0	1026.0	14.0	1053.0	29.0	1026.0	14.0	0.6
11USS04_3	808	2.26	0.488	0.010	0.0592	0.0013	0.74144	403.0	6.5	370.5	8.2	578.0	37.0	370.5	8.2	8.1
11USS04_4	197	2.503	4.780	0.052	0.3174	0.0040	0.50917	1780.8	9.0	1776.0	20.0	1799.0	22.0	1799.0	22.0	1.3
11USS04_5	184.5	3.277	0.128	0.005	0.0194	0.0004	0.13272	123.0	4.4	124.1	2.2	107.0	82.0	124.1	2.2	0.9
11USS04_6	426	1.126	0.531	0.008	0.0672	0.0009	0.33851	432.4	5.5	419.5	5.5	501.0	35.0	419.5	5.5	3.0
11USS04_7	732	2.58	3.906	0.065	0.2806	0.0032	0.63134	1614.0	13.0	1594.0	16.0	1664.0	31.0	1664.0	31.0	4.2
11USS04_8	116.6	1.32	0.932	0.020	0.0952	0.0016	0.33627	668.0	10.0	586.2	9.7	947.0	49.0	586.2	9.7	12.2
11USS04_9	248	2.004	4.469	0.036	0.3077	0.0026	0.62968	1725.7	6.9	1729.0	13.0	1722.0	12.0	1722.0	12.0	0.4
11USS04_10	208	2.235	5.606	0.042	0.3362	0.0031	0.54133	1916.7	6.5	1868.0	15.0	1976.0	15.0	1976.0	15.0	5.5
11USS04_11	175	0.846	0.883	0.047	0.0961	0.0017	0.4557	638.0	24.0	591.3	9.8	778.0	92.0	591.3	9.8	7.3
11USS04_12	498	1.772	0.102	0.003	0.0157	0.0003	0.0044048	98.2	2.7	100.6	1.7	62.0	67.0	100.6	1.7	2.4
11USS04_13	321.6	1.024	5.364	0.063	0.3409	0.0041	0.64945	1878.0	10.0	1891.0	20.0	1877.0	18.0	1877.0	18.0	0.7
11USS04_14	427	0.872	0.481	0.008	0.0645	0.0009	0.13303	398.8	5.6	403.0	5.2	421.0	48.0	403.0	5.2	1.1
11USS04_15	4.26	23.1	9.030	0.550	0.4160	0.0170	0.50928	2339.0	59.0	2232.0	79.0	2464.0	93.0	2464.0	93.0	9.4
11USS04_16	140.2	2.309	2.229	0.029	0.1991	0.0019	0.38681	1189.4	9.1	1170.0	10.0	1224.0	24.0	1170.0	10.0	1.6
11USS04_17	61.3	0.972	1.843	0.031	0.1765	0.0026	0.17497	1060.0	11.0	1047.0	14.0	1091.0	44.0	1047.0	14.0	1.2
11USS04_18	244.3	2.99	2.394	0.042	0.2030	0.0032	0.76635	1240.0	13.0	1191.0	17.0	1325.0	23.0	1191.0	17.0	4.0
11USS04_19	150.8	1.488	1.378	0.030	0.1371	0.0026	0.65124	881.0	12.0	828.0	15.0	1016.0	31.0	828.0	15.0	6.0
11USS04_20	218	1.625	0.532	0.011	0.0697	0.0012	0.49052	435.2	7.2	434.3	7.5	440.0	40.0	434.3	7.5	0.2
11USS04_21	90	0.844	13.370	0.150	0.5061	0.0059	0.71409	2705.0	10.0	2639.0	25.0	2769.0	16.0	2769.0	16.0	4.7
11USS04_22	515	22.2	0.744	0.017	0.0907	0.0013	0.4849	564.2	9.7	559.6	7.7	605.0	49.0	559.6	7.7	0.8
11USS04_23	560	1.803	0.543	0.006	0.0701	0.0009	0.41181	440.3	4.2	436.5	5.2	470.0	29.0	436.5	5.2	0.9
11USS04_24	130	3.16	3.956	0.041	0.2885	0.0029	0.55159	1625.8	8.6	1634.0	14.0	1610.0	21.0	1610.0	21.0	1.5
11USS04_25	173	0.877	4.457	0.048	0.3077	0.0030	0.51988	1722.2	8.9	1729.0	15.0	1723.0	19.0	1723.0	19.0	0.3
11USS04_26	272	3.37	4.487	0.042	0.3054	0.0027	0.61147	1730.0	7.7	1718.0	13.0	1740.0	16.0	1740.0	16.0	1.3
11USS04_27	87.2	2.78	13.330	0.250	0.4199	0.0067	0.74367	2701.0	18.0	2259.0	30.0	3058.0	20.0	3058.0	20.0	26.1
11USS04_28	633	2.34	0.176	0.004	0.0253	0.0005	0.27942	164.5	3.5	161.3	2.8	175.0	51.0	161.3	2.8	1.9
11USS04_29	211.5	2.29	1.597	0.021	0.1600	0.0024	0.39413	968.6	8.2	956.0	13.0	1005.0	33.0	956.0	13.0	1.3
11USS04_30	372	1.967	2.371	0.027	0.2104	0.0023	0.5713	1233.2	7.9	1231.0	12.0	1231.0	18.0	1231.0	18.0	0.0
11USS04_31	659	2.534	5.303	0.073	0.3347	0.0045	0.91712	1868.0	12.0	1861.0	22.0	1872.0	13.0	1872.0	13.0	0.6
11USS04_32	307	2.449	0.148	0.012	0.0179	0.0004	0.38775	139.0	11.0	114.3	2.2	500.0	150.0	114.3	2.2	17.8

11USS04_33	230	2.243	2.046	0.035	0.1887	0.0023	0.33499	1130.0	12.0	1114.0	13.0	1176.0	33.0	1114.0	13.0	1.4
11USS04_34	221	1.17	1.438	0.040	0.1343	0.0037	0.18064	903.0	17.0	812.0	21.0	1144.0	39.0	812.0	21.0	10.1
11USS04_35	342	3.65	3.018	0.034	0.2434	0.0033	0.61707	1412.6	8.8	1404.0	17.0	1411.0	20.0	1411.0	20.0	0.5
11USS04_36	122	2.12	5.686	0.053	0.3411	0.0029	0.44731	1929.7	8.4	1892.0	14.0	1947.0	19.0	1947.0	19.0	2.8
11USS04_37	138.6	1.224	4.135	0.081	0.2934	0.0056	0.63469	1661.0	16.0	1658.0	28.0	1649.0	36.0	1649.0	36.0	0.5
11USS04_39	310	2.52	0.520	0.010	0.0690	0.0007	0.24649	425.0	6.6	430.0	4.4	388.0	45.0	430.0	4.4	1.2
11USS04_40	260	2.34	3.400	0.100	0.2458	0.0066	0.8586	1500.0	24.0	1416.0	34.0	1634.0	26.0	1634.0	26.0	13.3
11USS04_41	720	2.827	4.087	0.034	0.2904	0.0032	0.73815	1651.3	6.9	1643.0	16.0	1652.0	15.0	1652.0	15.0	0.5
11USS04_42	144	1.123	0.519	0.013	0.0674	0.0013	0.54333	424.0	8.4	420.4	7.9	439.0	45.0	420.4	7.9	0.8
11USS04_44	283.7	1.565	0.109	0.004	0.0156	0.0004	0.47044	104.9	3.8	100.0	2.4	196.0	86.0	100.0	2.4	4.7
11USS04_45	218	2.877	2.377	0.026	0.2106	0.0019	0.49352	1236.2	8.1	1232.0	10.0	1239.0	21.0	1239.0	21.0	0.6
11USS04_46	231.1	1.077	4.108	0.041	0.2878	0.0025	0.50429	1655.4	8.1	1631.0	13.0	1678.0	18.0	1678.0	18.0	2.8
11USS04_47	269.2	1.536	4.138	0.052	0.2853	0.0036	0.65277	1661.0	10.0	1618.0	18.0	1698.0	21.0	1698.0	21.0	4.7
11USS04_48	246	3.47	3.840	0.066	0.2708	0.0059	0.70192	1599.0	14.0	1543.0	30.0	1666.0	28.0	1666.0	28.0	7.4
11USS04_49	88	0.961	0.562	0.018	0.0710	0.0012	0.19637	451.0	11.0	442.1	7.1	471.0	72.0	442.1	7.1	2.0
11USS04_50	95.5	1.046	4.400	0.160	0.2836	0.0075	0.66476	1708.0	31.0	1609.0	38.0	1818.0	56.0	1818.0	56.0	11.5
11USS04_51	289	1.085	1.837	0.021	0.1747	0.0020	0.3258	1059.2	7.5	1038.0	11.0	1072.0	25.0	1038.0	11.0	2.0
11USS04_52	443	2.374	1.893	0.053	0.1696	0.0035	0.33281	1078.0	19.0	1010.0	19.0	1186.0	54.0	1010.0	19.0	6.3
11USS04_52	341.6	1.931	2.112	0.026	0.1938	0.0026	0.69382	1152.3	8.4	1144.0	14.0	1153.0	20.0	1144.0	14.0	0.7
11USS04_54	617	1.912	0.104	0.003	0.0158	0.0002	0.28158	100.8	2.3	100.8	1.4	64.0	46.0	100.8	1.4	0.0
11USS04_55	307	1.799	3.469	0.048	0.2423	0.0026	0.71258	1521.0	11.0	1398.0	13.0	1697.0	17.0	1697.0	17.0	17.6
11USS04_56	589	2.26	2.305	0.035	0.1807	0.0037	0.61797	1214.0	11.0	1070.0	20.0	1472.0	29.0	1070.0	20.0	11.9
11USS04_57	176	2.69	1.777	0.044	0.1683	0.0038	0.74367	1037.0	16.0	1005.0	21.0	1096.0	33.0	1005.0	21.0	3.1
11USS04_58	76.2	3.42	2.233	0.058	0.1966	0.0041	0.60872	1188.0	18.0	1156.0	22.0	1258.0	39.0	1156.0	22.0	2.7
11USS04_59	319	3.35	4.818	0.041	0.3206	0.0029	0.77558	1787.6	7.2	1792.0	14.0	1774.0	12.0	1774.0	12.0	1.0
11USS04_60	555	1.647	0.789	0.013	0.0944	0.0010	0.47601	590.5	7.2	581.7	5.6	615.0	32.0	581.7	5.6	1.5
11USS04_61	171	1.708	3.673	0.062	0.2608	0.0048	0.78939	1567.0	14.0	1493.0	24.0	1663.0	23.0	1663.0	23.0	10.2
11USS04_62	84	3.285	1.054	0.035	0.1021	0.0028	0.31016	730.0	17.0	627.0	17.0	1090.0	72.0	627.0	17.0	14.1
11USS04_63	113	2.27	1.622	0.031	0.1655	0.0022	0.28319	977.0	12.0	987.0	12.0	958.0	38.0	987.0	12.0	1.0
11USS04_64	291	1.228	0.947	0.026	0.0996	0.0015	0.4914	675.0	13.0	612.2	8.6	943.0	46.0	612.2	8.6	9.3
11USS04_65	225	2.805	3.538	0.032	0.2684	0.0026	0.57448	1535.3	7.1	1533.0	13.0	1537.0	16.0	1537.0	16.0	0.3
11USS04_66	95.2	3.34	3.568	0.063	0.2438	0.0050	0.74587	1541.0	14.0	1405.0	26.0	1712.0	27.0	1712.0	27.0	17.9
11USS04_67	281	3.659	4.708	0.036	0.3162	0.0025	0.55863	1768.2	6.3	1771.0	12.0	1751.0	13.0	1751.0	13.0	1.1
11USS04_68	460	18.4	4.004	0.053	0.2810	0.0029	0.64479	1634.0	11.0	1596.0	15.0	1659.0	20.0	1659.0	20.0	3.8
11USS04_69	76.1	0.89	13.730	0.240	0.4881	0.0083	0.75476	2729.0	16.0	2569.0	36.0	2834.0	22.0	2834.0	22.0	9.4

11USS04_70	730	3.82	0.489	0.008	0.0614	0.0011	0.67906	403.7	5.3	384.3	7.0	541.0	35.0	384.3	7.0	4.8
11USS04_71	482	1.96	0.093	0.002	0.0139	0.0003	0.20201	89.7	2.2	88.9	1.6	129.0	59.0	88.9	1.6	0.9
11USS04_72	219	2.38	13.220	0.550	0.4980	0.0190	0.96221	2697.0	39.0	2601.0	83.0	2747.0	16.0	2747.0	16.0	5.3
11USS04_73	178	2.25	4.226	0.041	0.2958	0.0030	0.4661	1678.4	7.9	1670.0	15.0	1679.0	18.0	1679.0	18.0	0.5
11USS04_74	374	1.879	0.110	0.004	0.0164	0.0003	0.16054	105.9	3.4	104.9	1.8	159.0	77.0	104.9	1.8	0.9
11USS04_75	278	1.152	0.677	0.013	0.0853	0.0011	0.25667	524.8	7.7	527.7	6.4	514.0	48.0	527.7	6.4	0.6
11USS04_76	161	1.434	0.844	0.016	0.0993	0.0014	0.15431	621.7	8.9	610.2	8.2	671.0	48.0	610.2	8.2	1.8
11USS04_77	3.71	0	1.060	0.130	0.0805	0.0057	0.0076055	739.0	61.0	497.0	34.0	1480.0	250.0	DISC	DISC	66.4
11USS04_78	1020	1.4	0.111	0.005	0.0149	0.0002	0.088204	107.0	4.1	95.5	1.2	362.0	90.0	95.5	1.2	10.7
11USS04_79	646	1.81	0.114	0.005	0.0155	0.0003	0.35044	109.4	4.5	98.9	2.2	307.0	90.0	98.9	2.2	9.6
11USS04_80	142.8	1.028	0.800	0.014	0.0943	0.0012	0.13672	596.5	7.8	580.7	7.1	638.0	44.0	580.7	7.1	2.6
11USS04_81	64	1.001	2.932	0.073	0.2295	0.0037	0.56181	1390.0	19.0	1332.0	19.0	1486.0	41.0	1486.0	41.0	10.4
11USS04_82	172	1.482	3.700	0.046	0.2684	0.0036	0.60512	1571.9	9.7	1535.0	19.0	1612.0	23.0	1612.0	23.0	4.8
11USS04_84	324	2.831	3.273	0.033	0.2557	0.0024	0.55172	1475.9	7.5	1467.0	12.0	1485.0	18.0	1485.0	18.0	1.2
11USS04_86	1286	4.03	3.511	0.059	0.2549	0.0043	0.82033	1530.0	14.0	1463.0	22.0	1610.0	19.0	1610.0	19.0	9.1
11USS04_87	443	1.94	0.929	0.011	0.1077	0.0008	0.059503	666.5	5.9	659.3	4.5	696.0	28.0	659.3	4.5	1.1
11USS04_89	193.6	2.982	1.737	0.019	0.1671	0.0020	0.13099	1021.8	6.9	996.0	11.0	1081.0	25.0	996.0	11.0	2.5
11USS04_90	220	1.546	3.994	0.043	0.2843	0.0036	0.57243	1633.8	8.5	1612.0	18.0	1645.0	20.0	1645.0	20.0	2.0
11USS04_91	412	1.948	4.449	0.058	0.3009	0.0036	0.68798	1720.0	11.0	1695.0	18.0	1750.0	19.0	1750.0	19.0	3.1
11USS04_92	84.4	1.803	1.286	0.035	0.1284	0.0022	0.17012	838.0	16.0	779.0	13.0	1013.0	53.0	779.0	13.0	7.0
11USS04_93	125.8	1.116	0.833	0.016	0.0975	0.0015	0.25662	614.6	8.7	599.6	8.6	668.0	46.0	599.6	8.6	2.4
11USS04_94	162	1.844	2.745	0.027	0.2225	0.0023	0.25357	1341.0	7.4	1295.0	12.0	1413.0	25.0	1413.0	25.0	8.4
11USS04_95	640	1.444	0.112	0.004	0.0157	0.0002	0.41572	107.4	3.7	100.2	1.3	229.0	68.0	100.2	1.3	6.7
11USS04_96	810	2.04	0.104	0.002	0.0159	0.0003	0.20923	100.7	2.1	101.5	1.6	102.0	50.0	101.5	1.6	0.8
11USS04_97	180	1.798	0.550	0.012	0.0710	0.0008	0.18429	444.1	8.0	442.1	4.9	420.0	52.0	442.1	4.9	0.5
11USS04_98	197	2.09	0.806	0.015	0.0965	0.0013	0.31767	599.5	8.2	593.8	7.9	636.0	44.0	593.8	7.9	1.0
11USS04_99	559	2.78	0.093	0.003	0.0140	0.0004	0.50346	90.0	3.1	89.9	2.6	122.0	72.0	89.9	2.6	0.1
11USS04_100	113.2	1.159	0.763	0.026	0.0909	0.0014	0.26188	576.0	15.0	560.7	8.2	661.0	78.0	560.7	8.2	2.7
11USS04_102	205	1.117	0.434	0.008	0.0572	0.0010	0.27602	366.5	5.7	358.4	5.9	429.0	50.0	358.4	5.9	2.2
11USS04_104	770	2.79	0.109	0.003	0.0152	0.0003	0.41928	105.3	2.8	97.3	2.2	282.0	57.0	97.3	2.2	7.6
11USS04_105	38.9	-900	0.746	0.027	0.0911	0.0028	0.16356	565.0	15.0	561.0	16.0	597.0	93.0	561.0	16.0	0.7
11USS04_106	226	1.236	2.524	0.036	0.2103	0.0033	0.74403	1278.0	10.0	1230.0	18.0	1348.0	20.0	1348.0	20.0	8.8
11USS04_107	143	3.38	1.722	0.029	0.1669	0.0025	0.22076	1019.0	11.0	995.0	14.0	1057.0	37.0	995.0	14.0	2.4
11USS04_108	81.4	1.801	2.821	0.046	0.2326	0.0026	0.4602	1361.0	12.0	1348.0	13.0	1392.0	26.0	1392.0	26.0	3.2
11USS04_109	228	2.16	1.755	0.022	0.1733	0.0016	0.3733	1030.3	7.7	1030.1	8.6	1022.0	24.0	1030.1	8.6	0.0

11USS04_110	21.43	-630	0.821	0.043	0.0961	0.0037	0.36878	616.0	25.0	591.0	22.0	650.0	110.0	591.0	22.0	4.1
11USS04_111	92.6	1.064	3.966	0.058	0.2796	0.0037	0.84799	1628.0	12.0	1589.0	19.0	1682.0	19.0	1682.0	19.0	5.5
11USS04_112	372	3.85	0.583	0.010	0.0718	0.0014	0.63852	466.1	6.6	446.8	8.5	561.0	35.0	446.8	8.5	4.1
11USS04_113	202.6	1.574	2.925	0.037	0.2401	0.0027	0.64518	1389.1	9.9	1387.0	14.0	1394.0	20.0	1394.0	20.0	0.5
11USS04_114	288	1.369	3.399	0.035	0.2629	0.0028	0.53948	1503.5	8.1	1504.0	14.0	1511.0	21.0	1511.0	21.0	0.5
11USS04_115	809	8.15	3.231	0.038	0.2531	0.0029	0.54283	1463.8	9.0	1456.0	15.0	1489.0	20.0	1489.0	20.0	2.2
11USS04_116	686	2.343	0.156	0.009	0.0172	0.0005	0.12284	146.5	7.4	109.8	3.1	760.0	130.0	109.8	3.1	25.1
11USS04_117	86.6	2.11	1.998	0.039	0.1900	0.0043	0.6455	1113.0	13.0	1123.0	23.0	1111.0	34.0	1123.0	23.0	0.9
11USS04_118	572	6.16	6.562	0.091	0.3529	0.0049	0.87035	2053.0	12.0	1954.0	24.0	2142.0	14.0	2142.0	14.0	8.8
11USS04_119	137	1.191	12.420	0.300	0.4920	0.0130	0.91463	2631.0	24.0	2574.0	56.0	2703.0	20.0	2703.0	20.0	4.8
11USS04_120	512	1.285	0.516	0.012	0.0681	0.0020	0.67187	425.1	8.5	425.0	12.0	480.0	49.0	425.0	12.0	0.0
11USS04_121	473	2.15	3.448	0.037	0.2602	0.0036	0.78764	1515.0	8.4	1491.0	18.0	1541.0	17.0	1541.0	17.0	3.2
11USS05_1	341	2.87	0.173	0.003	0.0256	0.0004	0.44856	162.4	2.8	163.2	2.3	195.0	24.0	163.2	2.3	0.5
11USS05_2	189.9	2.57	3.059	0.048	0.2422	0.0048	0.74469	1423.0	11.0	1397.0	25.0	1461.0	18.0	1461.0	18.0	4.4
11USS05_3	99	1.133	1.791	0.022	0.1749	0.0022	0.49563	1042.6	7.8	1039.0	12.0	1043.0	12.0	1039.0	12.0	0.3
11USS05_4	215.5	2.08	3.510	0.100	0.2449	0.0070	0.83084	1532.0	22.0	1411.0	36.0	1714.0	19.0	1714.0	19.0	17.7
11USS05_5	97	0.755	1.846	0.017	0.1780	0.0015	0.42199	1061.7	5.9	1055.8	8.3	1076.0	13.0	1055.8	8.3	0.6
11USS05_6	181	0.81	0.506	0.007	0.0668	0.0006	0.32824	415.9	4.5	417.1	3.9	423.0	16.0	417.1	3.9	0.3
11USS05_7	355	1.213	0.702	0.007	0.0867	0.0008	0.54783	539.6	4.3	536.0	5.0	560.0	11.0	536.0	5.0	0.7
11USS05_8	186.7	1.075	0.443	0.008	0.0590	0.0006	0.44891	371.7	5.9	369.2	3.9	403.0	28.0	369.2	3.9	0.7
11USS05_9	107	1.375	0.730	0.010	0.0904	0.0010	0.39085	556.0	6.0	557.8	5.9	563.0	17.0	557.8	5.9	0.3
11USS05_10	228	1.867	2.787	0.016	0.2344	0.0012	0.39174	1352.4	4.1	1357.5	6.2	1343.8	7.0	1343.8	7.0	1.0
11USS05_11	107	0.732	1.633	0.018	0.1634	0.0013	0.36139	982.5	7.1	975.8	7.0	1002.0	13.0	975.8	7.0	0.7
11USS05_12	240	0.922	1.905	0.013	0.1828	0.0011	0.45951	1082.7	4.5	1082.4	6.0	1085.5	8.0	1082.4	6.0	0.0
11USS05_13	286	0.92	3.849	0.040	0.2785	0.0028	0.86635	1602.5	8.4	1584.0	14.0	1634.3	5.6	1634.3	5.6	3.1
11USS05_14	58.4	1.513	3.036	0.038	0.2186	0.0032	0.44473	1417.8	9.9	1274.0	17.0	1633.0	17.0	1633.0	17.0	22.0
11USS05_15	35.4	1.228	1.351	0.044	0.1173	0.0019	0.26652	865.0	19.0	715.0	11.0	1256.0	49.0	715.0	11.0	17.3
11USS05_16	42.6	0.6267	14.150	0.110	0.5342	0.0041	0.53757	2759.2	7.5	2759.0	17.0	2768.3	7.8	2768.3	7.8	0.3
11USS05_17	247	0.838	15.970	0.210	0.4956	0.0072	0.72592	2874.0	12.0	2594.0	31.0	3078.6	8.2	3078.6	8.2	15.7
11USS05_18	211	2.01	0.561	0.010	0.0721	0.0008	0.57211	452.2	6.1	448.7	5.0	496.0	18.0	448.7	5.0	0.8
11USS05_19	78.7	1.154	3.880	0.067	0.2767	0.0045	0.66905	1609.0	14.0	1574.0	23.0	1652.0	15.0	1652.0	15.0	4.7
11USS05_20	70.2	0.921	5.279	0.083	0.3276	0.0045	0.63615	1864.0	13.0	1826.0	22.0	1912.0	17.0	1912.0	17.0	4.5
11USS05_21	518.1	2.996	1.984	0.026	0.1805	0.0022	0.79941	1109.6	9.0	1069.0	12.0	1206.0	10.0	1069.0	12.0	3.7

11USS05_22	264.5	1.518	1.713	0.029	0.1643	0.0027	0.80522	1015.0	11.0	980.0	15.0	1087.0	14.0	980.0	15.0	3.4
11USS05_23	68.76	1.078	2.851	0.040	0.2316	0.0025	0.56538	1368.0	11.0	1343.0	13.0	1413.0	17.0	1413.0	17.0	5.0
11USS05_24	82.8	0.943	1.756	0.030	0.1677	0.0024	0.91092	1028.0	11.0	999.0	13.0	1094.0	13.0	999.0	13.0	2.8
11USS05_25	132	1.146	0.110	0.007	0.0149	0.0003	0.30114	105.3	6.4	95.3	1.7	470.0	110.0	95.3	1.7	9.5
11USS05_26	50.5	1.898	1.788	0.024	0.1762	0.0021	0.33589	1040.5	8.7	1046.0	12.0	1043.0	18.0	1046.0	12.0	0.5
11USS05_27	160	1.373	0.107	0.004	0.0152	0.0003	0.32922	102.6	3.2	96.9	2.0	271.0	41.0	96.9	2.0	5.6
11USS05_28	245	1.236	2.009	0.022	0.1885	0.0019	0.47885	1120.0	6.9	1113.0	10.0	1133.0	10.0	1113.0	10.0	0.6
11USS05_29	274	8.44	0.485	0.007	0.0630	0.0006	0.51621	401.2	4.9	393.7	3.8	450.0	16.0	393.7	3.8	1.9
11USS05_30	223	1.152	2.221	0.028	0.1983	0.0021	0.96115	1186.8	8.9	1166.0	11.0	1234.9	7.5	1166.0	11.0	1.8
11USS05_31	146	5.14	1.568	0.028	0.1557	0.0024	0.77628	956.0	11.0	933.0	13.0	1009.0	13.0	933.0	13.0	2.4
11USS05_33	45	1.06	1.532	0.043	0.1506	0.0019	0.3983	941.0	17.0	906.0	11.0	1029.0	34.0	906.0	11.0	3.7
11USS05_34	337	9.4	3.973	0.053	0.2846	0.0046	0.70774	1628.0	11.0	1614.0	23.0	1644.0	11.0	1644.0	11.0	1.8
11USS05_36	157	1.309	1.867	0.015	0.1792	0.0015	0.49294	1069.2	5.2	1062.7	8.0	1074.4	9.4	1062.7	8.0	0.6
11USS05_37	101	1.79	0.721	0.018	0.0892	0.0016	0.56715	552.0	10.0	550.6	9.2	556.0	26.0	550.6	9.2	0.3
11USS05_38	376	2.061	0.145	0.015	0.0150	0.0002	0.41552	136.0	13.0	95.7	1.5	820.0	180.0	95.7	1.5	29.6
11USS05_39	105.9	1.536	2.805	0.029	0.2297	0.0020	0.4676	1356.4	7.6	1333.0	11.0	1403.0	11.0	1403.0	11.0	5.0
11USS05_40	115	2.44	3.450	0.033	0.2662	0.0020	0.39594	1515.5	7.5	1521.0	10.0	1504.0	10.0	1504.0	10.0	1.1
11USS05_41	272	6.1	1.700	0.033	0.1609	0.0028	0.76825	1009.0	13.0	961.0	16.0	1107.0	23.0	961.0	16.0	4.8
11USS05_42	231	1.94	0.075	0.002	0.0117	0.0002	0.27756	73.2	2.0	74.8	1.2	175.0	29.0	74.8	1.2	2.2
11USS05_43	34.4	1.577	2.280	0.029	0.2009	0.0025	0.17757	1205.5	9.1	1180.0	14.0	1268.0	18.0	1180.0	14.0	2.1
11USS05_46	140.9	2.378	0.080	0.003	0.0120	0.0002	0.15871	78.0	3.2	76.9	1.5	297.0	50.0	76.9	1.5	1.4
11USS05_47	135	1.88	4.139	0.049	0.2963	0.0033	0.47514	1661.1	9.6	1674.0	16.0	1642.0	15.0	1642.0	15.0	1.9
11USS05_48	48.9	1.048	2.526	0.052	0.1933	0.0041	0.73342	1281.0	15.0	1138.0	22.0	1541.0	17.0	1138.0	22.0	11.2
11USS05_49	268.4	3.32	0.430	0.009	0.0574	0.0008	0.45844	362.7	6.6	359.4	5.1	437.0	35.0	359.4	5.1	0.9
11USS05_50	150.8	1.631	3.827	0.033	0.2763	0.0021	0.68905	1598.1	7.0	1573.0	11.0	1626.4	7.1	1626.4	7.1	3.3
11USS05_51	126.6	1.778	3.889	0.043	0.2822	0.0036	0.41406	1610.8	9.0	1605.0	19.0	1623.0	12.0	1623.0	12.0	1.1
11USS05_53	259	1.852	3.123	0.060	0.2507	0.0046	0.97969	1436.0	16.0	1441.0	24.0	1430.1	8.9	1430.1	8.9	0.8
11USS05_54	406	0.904	0.093	0.002	0.0140	0.0002	0.11846	90.7	1.9	89.3	1.0	216.0	33.0	89.3	1.0	1.5
11USS05_55	212.9	10.7	0.486	0.007	0.0635	0.0008	0.25327	401.8	5.0	396.5	4.7	438.0	25.0	396.5	4.7	1.3
11USS05_56	102	0.47	1.802	0.023	0.1782	0.0019	0.2936	1045.5	8.3	1057.0	10.0	1018.0	17.0	1057.0	10.0	1.1
11USS05_58	157	1.322	1.950	0.028	0.1852	0.0023	0.83782	1099.0	10.0	1095.0	12.0	1095.0	12.0	1095.0	12.0	0.4
11USS05_59	104.4	1.283	5.287	0.046	0.3353	0.0030	0.58371	1866.3	7.4	1866.0	15.0	1874.2	7.7	1874.2	7.7	0.4
11USS05_60	61.1	1.065	0.415	0.013	0.0556	0.0009	0.1987	351.7	9.5	348.5	5.2	392.0	45.0	348.5	5.2	0.9
11USS05_61	1650	2.95	0.082	0.007	0.0115	0.0010	0.93631	80.0	6.2	73.6	6.4	332.0	44.0	73.6	6.4	8.0
11USS05_62	395	2.369	4.731	0.049	0.3160	0.0034	0.97208	1772.0	8.7	1770.0	17.0	1772.5	6.8	1772.5	6.8	0.1

11USS05_63	130	1.476	4.839	0.041	0.3230	0.0031	0.68874	1793.4	6.8	1804.0	15.0	1781.8	6.6	1781.8	6.6	1.2
11USS05_64	620	1.25	0.422	0.025	0.0533	0.0034	0.98285	360.0	18.0	334.0	21.0	529.0	16.0	334.0	21.0	7.2
11USS05_65	118	1.847	5.641	0.051	0.3460	0.0026	0.50024	1923.8	7.8	1915.0	12.0	1930.0	8.1	1930.0	8.1	0.8
11USS05_66	254	1.915	12.520	0.120	0.4815	0.0043	0.71302	2644.0	8.8	2533.0	18.0	2720.8	9.4	2720.8	9.4	6.9
11USS05_67	198	3.58	3.787	0.057	0.2612	0.0039	0.83909	1593.0	12.0	1495.0	20.0	1725.9	9.5	1725.9	9.5	13.4
11USS05_68	224.7	2.9	1.785	0.046	0.1704	0.0026	0.90251	1039.0	17.0	1014.0	14.0	1094.0	25.0	1014.0	14.0	2.4
11USS05_69	47.6	1.359	1.774	0.025	0.1748	0.0018	0.35154	1036.8	9.3	1038.0	10.0	1033.0	18.0	1038.0	10.0	0.1
11USS05_70	63.3	1.432	4.533	0.068	0.2976	0.0047	0.71493	1736.0	13.0	1684.0	23.0	1816.0	13.0	1816.0	13.0	7.3
11USS05_71	58.7	1.692	1.764	0.021	0.1732	0.0020	0.24104	1031.6	7.8	1030.0	11.0	1036.0	15.0	1030.0	11.0	0.2
11USS05_72	120.8	1.63	4.280	0.038	0.3018	0.0025	0.42185	1689.0	7.3	1700.0	12.0	1672.5	8.8	1672.5	8.8	1.6
11USS05_73	203	1.286	0.101	0.003	0.0149	0.0002	0.21081	97.7	2.6	95.6	1.5	215.0	33.0	95.6	1.5	2.1
11USS05_74	93.9	1.258	14.550	0.220	0.5137	0.0069	0.90122	2784.0	14.0	2671.0	30.0	2859.3	8.5	2859.3	8.5	6.6
11USS05_76	358	2.14	2.495	0.051	0.2065	0.0036	0.9502	1265.0	17.0	1210.0	19.0	1385.8	9.2	1385.8	9.2	12.7
11USS05_75	1270	3.56	0.094	0.008	0.0130	0.0009	0.54863	90.5	7.8	83.0	6.0	315.0	65.0	83.0	6.0	8.3
11USS05_77	550	2.16	4.076	0.035	0.2869	0.0023	0.87508	1649.0	7.0	1626.0	12.0	1682.6	4.3	1682.6	4.3	3.4
11USS05_78	409	0.603	3.831	0.040	0.2756	0.0038	0.80216	1600.0	8.8	1569.0	19.0	1642.0	12.0	1642.0	12.0	4.4
11USS05_79	121.9	1.678	3.233	0.031	0.2482	0.0023	0.56038	1464.5	7.5	1429.0	12.0	1515.5	9.2	1515.5	9.2	5.7
11USS05_80	1630	8.5	0.242	0.026	0.0301	0.0034	0.98954	215.0	21.0	191.0	22.0	580.0	30.0	191.0	22.0	11.2
11USS05_81	390	2.739	4.102	0.028	0.2815	0.0020	0.68072	1655.1	5.7	1600.0	10.0	1722.8	5.8	1722.8	5.8	7.1
11USS05_82	139	2.05	3.651	0.092	0.2545	0.0066	0.95038	1557.0	21.0	1460.0	34.0	1704.0	14.0	1704.0	14.0	14.3
11USS05_83	84.6	0.796	3.484	0.040	0.2605	0.0026	0.42404	1524.0	8.8	1492.0	13.0	1563.0	13.0	1563.0	13.0	4.5
11USS05_85	100	0.924	4.193	0.045	0.2978	0.0033	0.69533	1672.0	8.7	1680.0	16.0	1672.0	11.0	1672.0	11.0	0.5
11USS05_86	425	1.662	2.496	0.050	0.2007	0.0037	0.92345	1270.0	15.0	1179.0	20.0	1426.0	16.0	1179.0	20.0	7.2
11USS05_87	61.7	1.873	2.695	0.055	0.2301	0.0036	0.34154	1325.0	15.0	1335.0	19.0	1323.0	18.0	1323.0	18.0	0.9
11USS05_88	39.6	1.49	2.704	0.040	0.2220	0.0032	0.3681	1328.0	11.0	1292.0	17.0	1371.0	20.0	1371.0	20.0	5.8
11USS05_89	1050	1.9	0.089	0.004	0.0117	0.0009	0.77856	86.3	3.8	74.8	5.9	470.0	120.0	74.8	5.9	13.3
11USS05_90	145.8	0.532	0.632	0.013	0.0782	0.0014	0.69698	498.9	7.9	485.3	8.6	582.0	16.0	485.3	8.6	2.7
11USS05_91	288	0.933	4.405	0.054	0.3017	0.0040	0.82746	1712.0	10.0	1699.0	20.0	1736.0	11.0	1736.0	11.0	2.1
11USS05_92	71.1	0.813	5.407	0.075	0.3303	0.0042	0.72761	1887.0	11.0	1839.0	20.0	1938.5	8.3	1938.5	8.3	5.1
11USS05_93	224.9	1.61	0.527	0.007	0.0684	0.0007	0.28505	429.3	4.9	426.4	3.9	452.0	16.0	426.4	3.9	0.7
11USS05_94	417	2.29	2.075	0.016	0.1927	0.0015	0.51583	1140.2	5.2	1136.0	7.9	1146.5	8.8	1136.0	7.9	0.4
11USS05_95	189	2.18	3.977	0.029	0.2844	0.0018	0.45978	1629.2	5.9	1613.6	9.2	1644.5	7.6	1644.5	7.6	1.9
11USS05_96	402	1.698	0.095	0.002	0.0138	0.0004	0.54454	92.0	2.1	88.5	2.2	212.0	33.0	88.5	2.2	3.8
11USS05_97	81	1.123	0.850	0.041	0.0916	0.0020	0.68729	620.0	21.0	565.0	12.0	817.0	62.0	565.0	12.0	8.9
11USS05_98	74.6	1.54	0.339	0.011	0.0462	0.0009	0.095885	296.1	8.2	290.9	5.7	420.0	46.0	290.9	5.7	1.8

11USS05_99	120.2	1.306	1.703	0.017	0.1673	0.0012	0.17008	1009.2	6.4	997.0	6.9	1027.0	12.0	997.0	6.9	1.2
11USS05_100	180	1.82	3.291	0.045	0.2562	0.0036	0.96448	1478.0	11.0	1470.0	18.0	1489.0	11.0	1489.0	11.0	1.3
11USS05_101	235	11.89	0.847	0.011	0.0989	0.0010	0.58215	622.7	6.3	607.7	5.8	691.0	13.0	607.7	5.8	2.4
11USS05_102	664	2.15	0.090	0.002	0.0135	0.0003	0.55966	87.4	2.0	86.5	1.6	200.0	29.0	86.5	1.6	1.0
11USS05_103	287	1.101	0.090	0.003	0.0136	0.0003	0.23895	87.3	2.9	87.1	1.6	229.0	43.0	87.1	1.6	0.2
11USS05_104	86.7	0.813	3.869	0.049	0.2813	0.0029	0.4489	1607.0	10.0	1598.0	15.0	1609.0	13.0	1609.0	13.0	0.7
11USS05_105	281	1.6	2.585	0.028	0.2176	0.0025	0.73136	1296.7	7.8	1269.0	13.0	1337.2	9.9	1337.2	9.9	5.1
11USS05_106	92.3	1.275	2.393	0.020	0.2087	0.0018	0.53892	1240.2	5.9	1221.6	9.4	1271.0	10.0	1271.0	10.0	3.9
11USS05_107	114	1.45	1.785	0.054	0.1736	0.0045	0.96717	1036.0	22.0	1031.0	25.0	1037.0	22.0	1031.0	25.0	0.5
11USS05_108	54.6	2.149	2.388	0.034	0.2139	0.0026	0.2087	1238.0	10.0	1249.0	14.0	1217.0	19.0	1217.0	19.0	2.6
11USS05_109	291	6.08	10.830	0.150	0.4354	0.0050	0.84315	2507.0	13.0	2329.0	22.0	2652.0	13.0	2652.0	13.0	12.2
11USS05_110	157.8	1.78	2.861	0.035	0.2351	0.0026	0.78473	1370.9	9.4	1361.0	13.0	1384.0	11.0	1384.0	11.0	1.7
11USS05_111	72.2	1.0087	4.179	0.049	0.2991	0.0026	0.49984	1669.0	9.7	1687.0	13.0	1653.0	11.0	1653.0	11.0	2.1
11USS05_112	443	1.83	0.236	0.017	0.0327	0.0023	0.95859	215.0	14.0	207.0	15.0	277.0	18.0	207.0	15.0	3.7
11USS05_114	198	1.64	0.613	0.010	0.0775	0.0007	0.18709	485.4	6.0	480.9	3.9	521.0	30.0	480.9	3.9	0.9
11USS05_116	17	1.041	4.750	0.110	0.3061	0.0058	0.46566	1780.0	19.0	1721.0	28.0	1850.0	27.0	1850.0	27.0	7.0
11USS05_117	47.9	0.4707	2.576	0.037	0.2172	0.0026	0.41876	1293.0	11.0	1268.0	13.0	1338.0	20.0	1338.0	20.0	5.2
11USS05_118	115	1.655	2.194	0.033	0.1994	0.0024	0.13555	1178.0	11.0	1172.0	13.0	1212.0	29.0	1172.0	13.0	0.5
11USS06_1	86.7	1.229	4.439	0.066	0.3073	0.0037	0.38195	1718.0	12.0	1727.0	18.0	1716.0	27.0	1716.0	27.0	0.6
11USS06_2	414	76	1.741	0.049	0.1726	0.0036	0.67101	1023.0	18.0	1026.0	20.0	1013.0	54.0	1026.0	20.0	0.3
11USS06_2	186	3.43	2.440	0.051	0.2175	0.0049	0.45357	1254.0	15.0	1274.0	24.0	1218.0	40.0	1218.0	40.0	4.6
11USS06_2	66.2	1.602	3.026	0.091	0.2512	0.0056	0.024747	1413.0	23.0	1444.0	29.0	1383.0	65.0	1383.0	65.0	4.4
11USS06_3	106.9	0.571	13.990	0.150	0.5297	0.0072	0.85338	2751.0	11.0	2739.0	30.0	2750.0	17.0	2750.0	17.0	0.4
11USS06_4	269	2.812	3.860	0.089	0.2846	0.0058	0.88498	1604.0	18.0	1614.0	29.0	1604.0	21.0	1604.0	21.0	0.6
11USS06_6	249	2.8	13.110	0.150	0.5155	0.0052	0.78087	2688.0	11.0	2679.0	22.0	2700.0	12.0	2700.0	12.0	0.8
11USS06_7	3570	4.06	0.350	0.009	0.0345	0.0017	0.21567	304.8	6.7	219.0	11.0	1000.0	110.0	219.0	11.0	28.1
11USS06_7	385	0.96	0.361	0.011	0.0471	0.0007	0.59376	312.8	7.9	296.9	4.4	405.0	56.0	296.9	4.4	5.1
11USS06_8	448	1.81	4.021	0.079	0.2729	0.0054	0.82788	1638.0	16.0	1555.0	27.0	1742.0	25.0	1742.0	25.0	10.7
11USS06_8	321	1.559	4.743	0.058	0.3246	0.0034	0.58673	1774.0	10.0	1812.0	16.0	1731.0	20.0	1731.0	20.0	4.7
11USS06_9	490	2.209	4.519	0.075	0.3098	0.0051	0.90759	1733.0	14.0	1739.0	25.0	1732.0	14.0	1732.0	14.0	0.4
11USS06_10	689	7.5	4.246	0.048	0.2972	0.0028	0.80276	1683.8	9.0	1677.0	14.0	1706.0	14.0	1706.0	14.0	1.7
11USS06_11	64.5	1.617	1.758	0.042	0.1701	0.0029	0.31527	1030.0	16.0	1012.0	16.0	1074.0	48.0	1012.0	16.0	1.7

11USS06_13	271	2.196	4.235	0.038	0.3018	0.0028	0.70341	1680.4	7.3	1700.0	14.0	1648.0	13.0	1648.0	13.0	3.2
11USS06_14	117	2.66	4.020	0.062	0.2881	0.0035	0.64576	1640.0	13.0	1632.0	17.0	1645.0	26.0	1645.0	26.0	0.8
11USS06_15	308	3.36	4.611	0.031	0.3143	0.0029	0.68907	1750.9	5.7	1761.0	14.0	1727.0	14.0	1727.0	14.0	2.0
11USS06_16	117.8	1.464	4.910	0.087	0.3201	0.0048	0.75378	1803.0	15.0	1790.0	23.0	1826.0	21.0	1826.0	21.0	2.0
11USS06_17	306	1.341	6.089	0.056	0.3576	0.0040	0.57919	1988.4	8.1	1974.0	20.0	2001.0	17.0	2001.0	17.0	1.3
11USS06_18	161	2.73	3.414	0.041	0.2646	0.0029	0.36879	1507.0	9.4	1513.0	15.0	1499.0	25.0	1499.0	25.0	0.9
11USS06_19	392	3.05	4.549	0.046	0.3071	0.0035	0.71891	1739.4	8.4	1726.0	17.0	1753.0	14.0	1753.0	14.0	1.5
11USS06_20	409	2.22	0.421	0.007	0.0562	0.0005	0.16609	356.2	5.0	352.5	3.2	370.0	39.0	352.5	3.2	1.0
11USS06_21	274.9	0.996	0.863	0.011	0.1021	0.0008	0.43297	631.4	5.9	626.5	4.8	638.0	26.0	626.5	4.8	0.8
11USS06_22	242	1.85	2.827	0.032	0.2196	0.0029	0.74225	1363.1	8.7	1279.0	15.0	1502.0	17.0	1502.0	17.0	14.8
11USS06_23	350	2.275	3.325	0.022	0.2626	0.0015	0.40533	1488.2	5.2	1503.2	7.5	1471.0	13.0	1471.0	13.0	2.2
11USS06_24	132.5	1.333	2.060	0.027	0.1964	0.0021	0.47961	1137.0	9.3	1156.0	11.0	1102.0	25.0	1156.0	11.0	1.7
11USS06_25	182.1	12.41	1.892	0.037	0.1716	0.0025	0.54002	1078.0	13.0	1020.0	14.0	1189.0	32.0	1020.0	14.0	5.4
11USS06_26	107.6	0.921	2.761	0.042	0.2245	0.0027	0.092322	1347.0	11.0	1305.0	14.0	1413.0	34.0	1413.0	34.0	7.6
11USS06_27	816	24.6	4.000	0.110	0.2771	0.0058	0.92505	1632.0	24.0	1576.0	29.0	1705.0	25.0	1705.0	25.0	7.6
11USS06_28	425	8.2	3.490	0.100	0.2560	0.0043	0.91801	1523.0	23.0	1469.0	22.0	1608.0	25.0	1608.0	25.0	8.6
11USS06_30	242	1.159	4.094	0.046	0.2927	0.0031	0.6781	1652.2	9.2	1655.0	15.0	1662.0	17.0	1662.0	17.0	0.4
11USS06_31	88.8	1.418	3.773	0.052	0.2759	0.0042	0.47156	1586.0	11.0	1570.0	21.0	1618.0	28.0	1618.0	28.0	3.0
11USS06_32	193	4.82	14.870	0.160	0.5378	0.0059	0.71544	2806.0	10.0	2773.0	25.0	2821.0	14.0	2821.0	14.0	1.7
11USS06_33	231.9	0.941	3.867	0.039	0.2756	0.0023	0.53211	1606.2	8.2	1571.0	12.0	1652.0	17.0	1652.0	17.0	4.9
11USS06_34	63.8	1.794	7.450	0.360	0.3651	0.0054	0.21853	2154.0	42.0	2006.0	25.0	2301.0	63.0	2301.0	63.0	12.8
11USS06_35	116	1.802	1.541	0.048	0.1501	0.0038	0.51572	944.0	19.0	901.0	21.0	1039.0	57.0	901.0	21.0	4.6
11USS06_36	268.8	80	4.497	0.044	0.3101	0.0025	0.57569	1731.7	8.4	1742.0	12.0	1710.0	16.0	1710.0	16.0	1.9
11USS06_37	75.7	1.99	3.240	0.150	0.2443	0.0092	0.81555	1458.0	37.0	1406.0	48.0	1547.0	53.0	1547.0	53.0	9.1
11USS06_38	302	2.37	2.997	0.058	0.2349	0.0047	0.74309	1408.0	14.0	1359.0	25.0	1462.0	26.0	1462.0	26.0	7.0
11USS06_39	44.9	1.508	2.279	0.058	0.2034	0.0035	0.41294	1203.0	18.0	1193.0	19.0	1213.0	52.0	1193.0	19.0	0.8
11USS06_40	367.9	1.638	0.558	0.018	0.0668	0.0008	0.14884	449.0	12.0	416.8	4.6	603.0	64.0	416.8	4.6	7.2
11USS06_41	207	3.08	0.545	0.010	0.0680	0.0008	0.31888	441.3	6.7	424.0	4.5	525.0	41.0	424.0	4.5	3.9
11USS06_42	145	1.546	8.470	0.110	0.4263	0.0067	0.79307	2285.0	13.0	2288.0	30.0	2271.0	21.0	2271.0	21.0	0.7
11USS06_43	1775	3.54	0.105	0.002	0.0155	0.0002	0.36044	101.1	1.8	99.2	1.3	143.0	44.0	99.2	1.3	1.9
11USS06_44	248.8	5.35	2.016	0.034	0.1872	0.0030	0.49998	1122.0	12.0	1106.0	16.0	1117.0	34.0	1106.0	16.0	1.4
11USS06_46	870	7.11	2.797	0.097	0.2240	0.0083	0.72696	1353.0	26.0	1302.0	44.0	1426.0	51.0	1426.0	51.0	8.7
11USS06_46	378	3.29	3.390	0.035	0.2608	0.0028	0.6397	1502.8	8.4	1494.0	14.0	1507.0	17.0	1507.0	17.0	0.9
11USS06_47	434	9.29	0.733	0.008	0.0907	0.0009	0.35502	558.3	4.5	559.4	5.3	574.0	26.0	559.4	5.3	0.2
11USS06_48	122.2	6.24	1.947	0.030	0.1837	0.0023	0.38468	1098.0	11.0	1087.0	12.0	1112.0	32.0	1087.0	12.0	1.0

11USS06_49	198.9	3.97	5.115	0.044	0.3301	0.0035	0.67089	1838.2	7.2	1840.0	17.0	1839.0	16.0	1839.0	16.0	0.1
11USS06_50	433	1.817	0.689	0.010	0.0863	0.0011	0.4768	532.4	5.9	533.3	6.4	557.0	30.0	533.3	6.4	0.2
11USS06_51	334.7	1.855	3.107	0.031	0.2530	0.0029	0.49924	1434.2	7.7	1454.0	15.0	1408.0	22.0	1408.0	22.0	3.3
11USS06_52	78	1.138	2.107	0.057	0.1940	0.0034	0.27388	1149.0	19.0	1143.0	19.0	1155.0	59.0	1143.0	19.0	0.5
11USS06_53	161	2.3	2.282	0.043	0.2042	0.0042	0.76803	1205.0	13.0	1201.0	24.0	1196.0	32.0	1196.0	24.0	0.3
11USS06_54	145.5	1.848	3.000	0.050	0.2321	0.0030	0.56535	1410.0	13.0	1345.0	16.0	1501.0	24.0	1501.0	24.0	10.4
11USS06_56	256	0.938	1.850	0.033	0.1749	0.0023	0.85056	1062.0	12.0	1039.0	13.0	1120.0	23.0	1039.0	13.0	2.2
11USS06_57	399	3.5	2.008	0.065	0.1683	0.0056	0.7096	1116.0	22.0	1002.0	31.0	1385.0	46.0	1002.0	31.0	10.2
11USS06_57	59.6	2.169	2.875	0.065	0.2358	0.0046	0.56331	1374.0	17.0	1369.0	25.0	1380.0	39.0	1380.0	39.0	0.8
11USS06_58	550	1.284	0.110	0.002	0.0165	0.0002	0.25448	105.8	2.2	105.4	1.4	138.0	53.0	105.4	1.4	0.4
11USS06_59	1422	14.1	0.389	0.025	0.0436	0.0025	0.28133	333.0	19.0	275.0	16.0	830.0	150.0	275.0	16.0	17.4
11USS06_59	550	20.9	0.520	0.012	0.0666	0.0015	0.56219	424.5	8.2	415.6	9.1	485.0	47.0	415.6	9.1	2.1
11USS06_60	132.1	0.937	11.280	0.110	0.4619	0.0052	0.46384	2545.6	8.9	2447.0	23.0	2613.0	18.0	2613.0	18.0	6.4
11USS06_61	424	30.6	0.536	0.017	0.0700	0.0018	0.58624	436.0	11.0	436.0	11.0	461.0	63.0	436.0	11.0	0.0
11USS06_61	252	5.31	1.447	0.053	0.1390	0.0048	0.85256	907.0	22.0	839.0	27.0	1039.0	33.0	839.0	27.0	7.5
11USS06_62	94.7	1.331	2.497	0.052	0.2094	0.0029	0.33387	1270.0	15.0	1226.0	15.0	1316.0	41.0	1316.0	41.0	6.8
11USS06_63	258	1.49	5.513	0.062	0.3366	0.0036	0.66803	1903.0	10.0	1873.0	18.0	1916.0	19.0	1916.0	19.0	2.2
11USS06_65	214	1.182	2.693	0.046	0.2236	0.0039	0.58367	1326.0	13.0	1300.0	21.0	1356.0	34.0	1356.0	34.0	4.1
11USS06_67	222	2.47	5.515	0.047	0.3419	0.0031	0.54012	1902.4	7.3	1895.0	15.0	1895.0	16.0	1895.0	16.0	0.0
11USS06_68	278	1.047	0.078	0.003	0.0119	0.0003	0.11104	76.4	2.4	76.4	1.8	103.0	78.0	76.4	1.8	0.0
11USS06_69	25.9	0.912	5.022	0.081	0.3265	0.0047	0.33923	1823.0	13.0	1821.0	23.0	1830.0	34.0	1830.0	34.0	0.5
11USS06_70	92	2.801	4.425	0.059	0.3034	0.0030	0.25542	1718.0	11.0	1708.0	15.0	1738.0	24.0	1738.0	24.0	1.7
11USS06_71	333	1.763	3.439	0.047	0.2662	0.0030	0.68082	1513.0	11.0	1521.0	16.0	1496.0	19.0	1496.0	19.0	1.7
11USS06_72	182	0.787	2.073	0.022	0.1906	0.0020	0.24759	1139.5	7.2	1124.0	11.0	1152.0	25.0	1124.0	11.0	1.4
11USS06_74	358	6.7	10.132	0.083	0.4631	0.0048	0.058858	2448.0	7.2	2453.0	21.0	2442.0	20.0	2442.0	20.0	0.5
11USS06_76	218	1.318	4.207	0.045	0.2979	0.0037	0.55932	1674.7	8.7	1680.0	18.0	1663.0	20.0	1663.0	20.0	1.0
11USS06_78	60.6	0.996	0.569	0.019	0.0696	0.0017	0.053005	458.0	12.0	435.0	11.0	569.0	85.0	435.0	11.0	5.0
11USS06_79	91	1.036	1.697	0.030	0.1668	0.0019	0.27089	1006.0	11.0	996.0	11.0	1061.0	35.0	996.0	11.0	1.0
11USS06_80	644	1.091	1.552	0.055	0.1502	0.0045	0.77674	949.0	22.0	902.0	25.0	1073.0	38.0	902.0	25.0	5.0
11USS06_81	164	1.915	2.858	0.038	0.2286	0.0027	0.61316	1370.0	10.0	1327.0	14.0	1441.0	24.0	1441.0	24.0	7.9
11USS06_82	72.9	0.842	3.253	0.048	0.2473	0.0034	0.39743	1471.0	11.0	1424.0	18.0	1525.0	27.0	1525.0	27.0	6.6
11USS06_83	321	1.956	4.905	0.067	0.3241	0.0051	0.66536	1803.0	12.0	1809.0	25.0	1809.0	23.0	1809.0	23.0	0.0
11USS06_83	150.9	1.221	5.101	0.067	0.3412	0.0035	0.46842	1836.0	11.0	1892.0	17.0	1785.0	19.0	1785.0	19.0	6.0
11USS06_85	422.9	16.6	2.230	0.062	0.1932	0.0033	0.38421	1188.0	20.0	1138.0	18.0	1280.0	39.0	1138.0	18.0	4.2
11USS06_86	417	0.878	0.853	0.012	0.0999	0.0013	0.44017	627.0	6.2	613.9	7.7	702.0	30.0	613.9	7.7	2.1

11USS06_87	339	5.97	3.975	0.041	0.2888	0.0027	0.62082	1629.7	8.5	1635.0	14.0	1637.0	14.0	1637.0	14.0	0.1
11USS06_88	312	1.564	4.096	0.040	0.2960	0.0035	0.84178	1653.2	7.9	1671.0	17.0	1641.0	15.0	1641.0	15.0	1.8
11USS06_89	1890	1.162	0.103	0.002	0.0153	0.0002	0.3307	99.4	1.6	97.8	1.1	115.0	35.0	97.8	1.1	1.6
11USS06_90	322	1.719	4.416	0.029	0.3046	0.0022	0.40422	1715.1	5.5	1714.0	11.0	1724.0	13.0	1724.0	13.0	0.6
11USS06_91	303	6.1	0.509	0.008	0.0664	0.0009	0.28227	417.2	5.4	414.4	5.1	442.0	35.0	414.4	5.1	0.7
11USS06_92	241	4.64	2.162	0.055	0.1956	0.0036	0.53099	1168.0	18.0	1151.0	19.0	1217.0	44.0	1151.0	19.0	1.5
11USS06_92	106.7	1.753	2.642	0.058	0.2217	0.0033	0.018051	1311.0	16.0	1291.0	17.0	1371.0	51.0	1371.0	51.0	5.8
11USS06_93	156.1	1.244	3.831	0.043	0.2721	0.0041	0.58094	1601.0	8.6	1551.0	21.0	1667.0	24.0	1667.0	24.0	7.0
11USS06_94	166.7	2.514	2.024	0.031	0.1891	0.0022	0.49224	1124.0	11.0	1117.0	12.0	1146.0	27.0	1117.0	12.0	0.6
11USS06_95	475	1.626	2.090	0.028	0.1965	0.0026	0.5425	1145.1	9.3	1156.0	14.0	1150.0	27.0	1156.0	14.0	1.0
11USS06_96	302	2.371	2.923	0.030	0.2397	0.0023	0.74146	1387.4	7.7	1385.0	12.0	1397.0	15.0	1397.0	15.0	0.9
11USS06_97	12.23	0.642	2.010	0.092	0.1795	0.0062	0.47029	1109.0	31.0	1062.0	34.0	1220.0	73.0	1062.0	34.0	4.2
11USS06_98	310	1.71	0.079	0.003	0.0118	0.0002	0.075252	77.5	2.9	75.5	1.4	180.0	83.0	75.5	1.4	2.6
11USS06_99	10.26	-416	0.777	0.073	0.0801	0.0040	0.24117	568.0	40.0	496.0	24.0	770.0	180.0	496.0	24.0	12.7
11USS06_100	571	2.73	0.510	0.007	0.0672	0.0008	0.071062	418.0	4.8	419.4	4.6	414.0	32.0	419.4	4.6	0.3
11USS06_101	696	2.52	0.501	0.017	0.0599	0.0011	0.34368	412.0	11.0	375.2	6.4	637.0	76.0	375.2	6.4	8.9
11USS06_101	303	1.119	0.673	0.015	0.0698	0.0013	0.54886	523.7	8.7	434.9	7.6	930.0	39.0	434.9	7.6	17.0
11USS06_102	72.3	0.875	26.580	0.370	0.6395	0.0097	0.96202	3367.0	14.0	3186.0	38.0	3470.0	16.0	3470.0	16.0	8.2
11USS06_103	113.1	2.039	0.410	0.034	0.0446	0.0019	0.061996	344.0	23.0	281.0	12.0	695.0	93.0	281.0	12.0	18.3
11USS06_104	59.2	1.79	3.593	0.067	0.2632	0.0061	0.46098	1548.0	15.0	1505.0	31.0	1606.0	44.0	1606.0	44.0	6.3
11USS06_105	251	1.154	2.408	0.026	0.2115	0.0021	0.3804	1245.5	7.9	1237.0	11.0	1252.0	22.0	1252.0	22.0	1.2
11USS06_106	67.7	1.899	3.982	0.046	0.2827	0.0033	0.26712	1629.8	9.3	1605.0	16.0	1634.0	29.0	1634.0	29.0	1.8
11USS06_107	698	1.89	2.477	0.019	0.2108	0.0016	0.70605	1265.1	5.5	1233.2	8.5	1319.0	11.0	1319.0	11.0	6.5
11USS06_108	152	1.256	0.475	0.016	0.0609	0.0013	0.4492	394.0	11.0	380.9	7.8	476.0	65.0	380.9	7.8	3.3
11USS06_109	201.6	1.358	0.539	0.013	0.0690	0.0012	0.3511	437.1	8.4	430.3	7.1	474.0	52.0	430.3	7.1	1.6
11USS06_110	112.3	1.798	4.299	0.046	0.3009	0.0029	0.47046	1692.7	8.8	1695.0	14.0	1695.0	17.0	1695.0	17.0	0.0
11USS06_111	63.1	1.464	2.051	0.040	0.1938	0.0029	0.25478	1140.0	14.0	1141.0	16.0	1125.0	44.0	1141.0	16.0	0.1
11USS06_113	722	1.96	0.540	0.010	0.0663	0.0009	0.43091	438.1	6.8	413.8	5.7	565.0	40.0	413.8	5.7	5.5
11USS06_113	368	3.487	0.742	0.024	0.0896	0.0016	0.70376	569.0	15.0	553.1	9.5	607.0	55.0	553.1	9.5	2.8
11USS06_114	72.9	1.124	2.745	0.053	0.2231	0.0031	0.33653	1343.0	14.0	1298.0	16.0	1421.0	38.0	1421.0	38.0	8.7
11USS06_115	186	1.634	1.522	0.019	0.1565	0.0014	0.42571	939.7	7.6	937.1	8.1	962.0	24.0	937.1	8.1	0.3
11USS06_116	177.7	1.773	2.882	0.037	0.2356	0.0024	0.50935	1378.2	9.4	1364.0	13.0	1396.0	22.0	1396.0	22.0	2.3
11USS06_117	442	66.9	1.826	0.023	0.1772	0.0019	0.60213	1056.0	8.0	1052.0	11.0	1054.0	22.0	1052.0	11.0	0.4
11USS06_118	154.9	1.347	4.049	0.054	0.2888	0.0045	0.77276	1645.0	11.0	1635.0	22.0	1653.0	24.0	1653.0	24.0	1.1
11USS06_119	348	1.343	3.727	0.039	0.2631	0.0022	0.67057	1576.6	8.4	1505.0	11.0	1672.0	14.0	1672.0	14.0	10.0

11USS06_120	507	1.258	0.607	0.007	0.0774	0.0006	0.17345	482.2	4.5	480.7	3.3	485.0	26.0	480.7	3.3	0.3
11USS07_1	63.4	1.247	3.032	0.041	0.2429	0.0027	0.75345	1415.0	10.0	1401.0	14.0	1442.0	12.0	1442.0	12.0	2.8
11USS07_2	56.4	1.796	2.023	0.027	0.1902	0.0026	0.41335	1123.6	9.4	1122.0	14.0	1136.0	17.0	1122.0	14.0	0.1
11USS07_3	197	1.631	2.445	0.024	0.2123	0.0018	0.45881	1255.6	7.1	1240.8	9.3	1287.0	15.0	1287.0	15.0	3.6
11USS07_4	31.4	1.725	1.707	0.031	0.1593	0.0019	0.36992	1010.0	12.0	953.0	10.0	1161.0	20.0	953.0	10.0	5.6
11USS07_5	132	1.374	6.720	0.140	0.3763	0.0049	0.83109	2075.0	18.0	2058.0	23.0	2099.0	15.0	2099.0	15.0	2.0
11USS07_6	145	0.939	2.134	0.033	0.1939	0.0018	0.45269	1159.0	11.0	1142.2	9.9	1201.0	24.0	1142.2	9.9	1.4
11USS07_7	142.8	1.434	2.121	0.020	0.1960	0.0019	0.57552	1156.1	6.7	1154.0	10.0	1171.0	10.0	1154.0	10.0	0.2
11USS07_8	76	0.751	1.961	0.027	0.1830	0.0022	0.61079	1101.5	9.1	1083.0	12.0	1151.0	13.0	1083.0	12.0	1.7
11USS07_9	231.9	1.368	5.204	0.052	0.3267	0.0030	0.66191	1852.8	8.6	1822.0	14.0	1885.0	10.0	1885.0	10.0	3.3
11USS07_10	274	2.371	1.960	0.020	0.1849	0.0018	0.96218	1101.3	7.3	1093.5	9.7	1117.6	6.4	1093.5	9.7	0.7
11USS07_11	105.6	1.774	5.322	0.045	0.3307	0.0028	0.43797	1871.9	7.2	1842.0	14.0	1912.0	10.0	1912.0	10.0	3.7
11USS07_12	65.2	1.125	11.369	0.092	0.4817	0.0041	0.54344	2553.3	7.5	2534.0	18.0	2581.7	7.8	2581.7	7.8	1.8
11USS07_13	157	0.916	0.462	0.006	0.0616	0.0005	0.38964	385.7	4.3	385.0	3.3	404.0	20.0	385.0	3.3	0.2
11USS07_14	297	0.75	3.025	0.028	0.2434	0.0022	0.85648	1413.5	6.9	1404.0	11.0	1431.8	6.5	1431.8	6.5	1.9
11USS07_15	188.8	0.672	2.081	0.061	0.1780	0.0048	0.60959	1139.0	21.0	1060.0	25.0	1305.0	16.0	1060.0	25.0	6.9
11USS07_16	247	0.685	0.080	0.003	0.0118	0.0002	0.24743	77.8	2.6	75.4	1.2	190.0	37.0	75.4	1.2	3.1
11USS07_17	27.1	0.819	2.184	0.037	0.1898	0.0028	0.50434	1175.0	12.0	1120.0	15.0	1295.0	18.0	1120.0	15.0	4.7
11USS07_18	107.1	1.065	6.430	0.066	0.3674	0.0034	0.68534	2035.6	9.0	2017.0	16.0	2061.0	7.2	2061.0	7.2	2.1
11USS07_19	46.6	0.764	0.731	0.013	0.0903	0.0011	0.18197	557.7	7.6	557.5	6.3	568.0	24.0	557.5	6.3	0.0
11USS07_20	166.3	1.463	1.627	0.023	0.1624	0.0020	0.89052	983.0	9.5	970.0	11.0	1007.0	10.0	970.0	11.0	1.3
11USS07_21	85.4	1.613	4.379	0.044	0.3060	0.0036	0.69345	1707.7	8.3	1723.0	17.0	1694.2	9.9	1694.2	9.9	1.7
11USS07_22	151	3.29	2.517	0.026	0.2187	0.0018	0.95712	1276.4	7.5	1275.0	9.7	1285.7	7.0	1285.7	7.0	0.8
11USS07_23	137.8	1.923	3.531	0.045	0.2451	0.0030	0.78164	1534.0	10.0	1413.0	15.0	1713.0	10.0	1713.0	10.0	17.5
11USS07_24	6.89	3.97	2.279	0.087	0.1571	0.0046	0.52871	1204.0	28.0	940.0	26.0	1765.0	43.0	940.0	26.0	21.9
11USS07_25	73.1	1.6	2.990	0.036	0.2411	0.0031	0.61057	1404.7	9.1	1392.0	16.0	1426.0	13.0	1426.0	13.0	2.4
11USS07_26	37.1	0.937	4.552	0.089	0.2535	0.0046	0.76053	1741.0	16.0	1456.0	24.0	2098.0	14.0	DISC	DISC	30.6
11USS07_27	401.7	1.453	1.600	0.017	0.1489	0.0019	0.70092	969.8	6.7	895.0	10.0	1156.0	15.0	895.0	10.0	7.7
11USS07_28	97.3	0.6739	12.313	0.075	0.4971	0.0035	0.70251	2628.3	5.7	2601.0	15.0	2652.7	4.6	2652.7	4.6	1.9
11USS07_29	159	12.66	2.234	0.022	0.1954	0.0019	0.5745	1191.4	6.9	1150.0	10.0	1262.0	13.0	1150.0	10.0	3.5
11USS07_30	63.9	1.02	1.864	0.036	0.1736	0.0032	0.4493	1067.0	13.0	1032.0	17.0	1136.0	23.0	1032.0	17.0	3.3
11USS07_31	176	1.552	5.228	0.060	0.3311	0.0041	0.76333	1858.7	9.7	1843.0	20.0	1865.4	7.0	1865.4	7.0	1.2
11USS07_32	85	1.254	2.393	0.027	0.2130	0.0023	0.55607	1240.0	8.0	1245.0	12.0	1225.0	15.0	1225.0	15.0	1.6

11USS07_33	354.6	1.802	4.533	0.034	0.3043	0.0026	0.7267	1737.4	6.1	1712.0	13.0	1771.7	7.5	1771.7	7.5	3.4
11USS07_34	139.1	2.09	3.219	0.023	0.2544	0.0021	0.6245	1461.5	5.5	1461.0	11.0	1466.0	10.0	1466.0	10.0	0.3
11USS07_35	167	2.07	1.928	0.018	0.1845	0.0021	0.55142	1091.6	6.6	1091.0	11.0	1093.0	10.0	1091.0	11.0	0.1
11USS07_36	55.4	1.908	3.114	0.045	0.2475	0.0039	0.53379	1435.0	11.0	1425.0	20.0	1452.0	17.0	1452.0	17.0	1.9
11USS07_37	253	1.677	4.842	0.077	0.3118	0.0049	0.84004	1791.0	13.0	1749.0	24.0	1820.0	15.0	1820.0	15.0	3.9
11USS07_38	148	1.328	0.290	0.007	0.0384	0.0008	0.70829	257.8	5.7	242.7	4.8	435.0	43.0	242.7	4.8	5.9
11USS07_39	57.7	0.574	4.636	0.072	0.2953	0.0050	0.81166	1754.0	13.0	1670.0	25.0	1858.0	10.0	1858.0	10.0	10.1
11USS07_40	222	1.076	4.962	0.036	0.3211	0.0026	0.74484	1812.6	6.1	1795.0	13.0	1826.8	6.2	1826.8	6.2	1.7
11USS07_41	147	0.914	2.015	0.018	0.1896	0.0013	0.50804	1120.8	6.1	1119.2	7.2	1129.6	9.3	1119.2	7.2	0.1
11USS07_42	80.8	0.8558	2.935	0.034	0.2352	0.0021	0.4532	1390.5	8.7	1361.0	11.0	1432.6	9.8	1432.6	9.8	5.0
11USS07_43	76	1.34	5.111	0.050	0.3294	0.0032	0.64779	1839.4	8.3	1835.0	15.0	1843.8	8.7	1843.8	8.7	0.5
11USS07_45	159.7	1.076	0.082	0.003	0.0115	0.0002	0.041042	79.6	2.5	73.5	1.2	328.0	45.0	73.5	1.2	7.7
11USS07_46	367	29.1	0.476	0.011	0.0624	0.0014	0.93829	394.7	8.0	390.0	8.7	442.0	15.0	390.0	8.7	1.2
11USS07_47	85.1	0.982	2.689	0.032	0.2262	0.0029	0.63738	1324.6	8.9	1314.0	15.0	1342.0	12.0	1342.0	12.0	2.1
11USS07_48	110.6	1.043	2.045	0.021	0.1913	0.0020	0.61563	1130.2	6.9	1128.0	11.0	1144.0	10.0	1128.0	11.0	0.2
11USS07_49	268	0.93	1.915	0.040	0.1809	0.0029	0.9084	1085.0	14.0	1071.0	16.0	1119.0	12.0	1071.0	16.0	1.3
11USS07_50	120.7	1.062	7.840	0.050	0.4047	0.0027	0.6855	2212.5	5.8	2191.0	12.0	2233.3	5.5	2233.3	5.5	1.9
11USS07_51	193	0.961	0.077	0.002	0.0120	0.0002	0.12484	75.6	2.0	77.0	1.3	175.0	34.0	77.0	1.3	1.9
11USS07_52	427	216	0.450	0.008	0.0592	0.0010	0.84067	376.9	5.7	371.0	6.3	412.0	17.0	371.0	6.3	1.6
11USS07_53	26.3	0.778	1.914	0.035	0.1805	0.0026	0.17966	1085.0	12.0	1069.0	14.0	1118.0	23.0	1069.0	14.0	1.5
11USS07_54	32.3	0.975	3.039	0.053	0.2331	0.0033	0.48875	1417.0	13.0	1350.0	17.0	1516.0	21.0	1516.0	21.0	10.9
11USS07_55	118	2.432	1.689	0.017	0.1677	0.0018	0.53261	1005.6	6.8	999.0	10.0	1010.0	12.0	999.0	10.0	0.7
11USS07_56	201	2.634	1.888	0.020	0.1766	0.0018	0.51596	1076.3	6.9	1049.5	9.9	1122.0	10.0	1049.5	9.9	2.5
11USS07_58	232	1.064	3.045	0.038	0.2403	0.0032	0.74518	1419.3	9.4	1388.0	16.0	1459.0	13.0	1459.0	13.0	4.9
11USS07_60	40.5	1.395	2.206	0.039	0.1995	0.0026	0.45123	1183.0	12.0	1172.0	14.0	1211.0	20.0	1172.0	14.0	0.9
11USS07_61	337	1.463	10.330	0.110	0.4681	0.0062	0.78678	2465.0	10.0	2478.0	26.0	2453.9	9.9	2453.9	9.9	1.0
11USS07_62	425	1.071	2.238	0.032	0.1598	0.0028	0.87674	1193.8	9.8	955.0	15.0	1658.0	12.0	955.0	15.0	20.0
11USS07_63	176.8	2.103	0.387	0.006	0.0524	0.0006	0.20721	331.9	4.4	329.3	3.4	368.0	20.0	329.3	3.4	0.8
11USS07_64	238	1.929	1.840	0.017	0.1778	0.0013	0.84069	1059.4	6.1	1055.0	7.3	1073.9	9.4	1055.0	7.3	0.4
11USS07_65	86.6	0.977	1.864	0.021	0.1778	0.0021	0.6357	1067.9	7.5	1055.0	11.0	1091.0	12.0	1055.0	11.0	1.2
11USS07_66	99	0.928	5.182	0.057	0.3329	0.0044	0.69289	1848.8	9.5	1852.0	21.0	1842.0	12.0	1842.0	12.0	0.5
11USS07_67	352	1.28	4.029	0.072	0.2707	0.0054	0.92841	1640.0	15.0	1543.0	27.0	1767.1	7.8	1767.1	7.8	12.7
11USS07_68	253.4	1.318	1.809	0.024	0.1786	0.0023	0.76206	1048.3	8.6	1059.0	12.0	1031.2	9.6	1059.0	12.0	1.0
11USS07_69	155.8	2.441	1.901	0.018	0.1806	0.0017	0.37672	1082.4	6.2	1069.9	9.2	1106.0	12.0	1069.9	9.2	1.2

11USS07_70	160.4	0.4594	2.050	0.024	0.1912	0.0032	0.60511	1132.0	8.1	1130.0	18.0	1154.0	16.0	1130.0	18.0	0.2
11USS07_71	46.6	0.763	3.196	0.041	0.2450	0.0032	0.42752	1457.6	9.3	1412.0	17.0	1518.0	16.0	1518.0	16.0	7.0
11USS07_73	39.5	2.112	4.034	0.046	0.2801	0.0031	0.40645	1643.3	9.8	1592.0	16.0	1713.0	17.0	1713.0	17.0	7.1
11USS07_74	144.1	0.938	1.603	0.014	0.1593	0.0013	0.39991	970.9	5.4	952.9	7.1	1019.0	12.0	952.9	7.1	1.9
11USS07_75	324	2.61	4.399	0.072	0.3034	0.0046	0.89366	1712.0	14.0	1707.0	23.0	1710.2	8.5	1710.2	8.5	0.2
11USS07_76	63.4	1.418	2.000	0.049	0.1721	0.0037	0.70351	1115.0	16.0	1023.0	20.0	1283.0	26.0	1023.0	20.0	8.3
11USS07_77	342	1.133	2.858	0.025	0.2286	0.0019	0.81384	1370.7	6.7	1326.9	9.8	1444.3	8.4	1444.3	8.4	8.1
11USS07_78	21.2	1.453	1.542	0.044	0.1453	0.0035	0.56488	945.0	17.0	874.0	20.0	1132.0	28.0	874.0	20.0	7.5
11USS07_79	83.7	1.059	5.128	0.034	0.3340	0.0022	0.55589	1841.2	5.8	1857.0	11.0	1830.3	6.2	1830.3	6.2	1.5
11USS07_80	62.2	0.658	4.575	0.045	0.2980	0.0029	0.57033	1744.2	8.2	1681.0	14.0	1814.9	8.7	1814.9	8.7	7.4
11USS07_81	72.7	1.84	3.306	0.053	0.2595	0.0031	0.74297	1482.0	13.0	1487.0	16.0	1490.0	14.0	1490.0	14.0	0.2
11USS07_82	18.6	1.512	2.352	0.078	0.1880	0.0049	0.88967	1222.0	25.0	1109.0	27.0	1471.0	20.0	1109.0	27.0	9.2
11USS07_83	139	1.197	4.476	0.039	0.3032	0.0027	0.59329	1727.0	7.4	1707.0	14.0	1745.1	6.0	1745.1	6.0	2.2
11USS07_84	84.3	1.417	1.772	0.018	0.1758	0.0016	0.29762	1034.7	6.5	1043.7	8.7	1014.0	16.0	1043.7	8.7	0.9
11USS07_85	183.3	1.945	1.898	0.016	0.1815	0.0014	0.50708	1080.3	5.5	1075.3	7.8	1092.0	10.0	1075.3	7.8	0.5
11USS07_87	36.5	0.866	6.410	0.066	0.3641	0.0034	0.47932	2032.8	9.0	2001.0	16.0	2071.0	10.0	2071.0	10.0	3.4
11USS07_88	152	1.114	0.506	0.008	0.0661	0.0010	0.53847	415.6	5.0	412.5	6.2	431.0	22.0	412.5	6.2	0.7
11USS07_89	126	1.42	16.610	0.230	0.5608	0.0081	0.83244	2911.0	13.0	2868.0	33.0	2930.2	8.2	2930.2	8.2	2.1
11USS07_92	61.5	0.613	3.992	0.038	0.2879	0.0020	0.38508	1633.1	8.0	1634.0	10.0	1643.6	9.7	1643.6	9.7	0.6
11USS07_93	566	1.421	0.105	0.003	0.0149	0.0003	0.68445	101.4	2.5	95.5	1.8	264.0	29.0	95.5	1.8	5.8
11USS07_94	41.5	0.626	2.670	0.042	0.2184	0.0033	0.89432	1322.0	13.0	1269.0	19.0	1426.0	15.0	1426.0	15.0	11.0
11USS07_95	236	1.007	0.100	0.008	0.0118	0.0003	0.64207	96.2	7.3	75.5	2.0	690.0	110.0	75.5	2.0	21.5
11USS07_96	116.6	1.24	4.232	0.073	0.2919	0.0059	0.7568	1678.0	14.0	1650.0	29.0	1710.0	17.0	1710.0	17.0	3.5
11USS07_97	107.7	0.803	2.868	0.036	0.2351	0.0030	0.54341	1374.0	9.6	1362.0	16.0	1394.0	15.0	1394.0	15.0	2.3
11USS07_98	51.2	1.057	6.833	0.059	0.3853	0.0038	0.67501	2089.4	7.6	2101.0	18.0	2076.6	8.8	2076.6	8.8	1.2
11USS07_99	185	0.876	0.077	0.002	0.0117	0.0002	0.053049	75.4	1.8	74.9	1.2	172.0	24.0	74.9	1.2	0.7
11USS07_100	32.47	0.844	5.540	0.055	0.3417	0.0040	0.4125	1907.2	8.7	1895.0	19.0	1929.8	8.9	1929.8	8.9	1.8
11USS07_101	245	1.947	4.622	0.047	0.3166	0.0039	0.72763	1753.7	8.6	1773.0	19.0	1735.5	9.7	1735.5	9.7	2.2
11USS07_102	191	0.926	0.078	0.003	0.0118	0.0002	0.26918	75.8	2.4	75.4	1.5	208.0	37.0	75.4	1.5	0.5
11USS07_103	70.3	1.331	1.592	0.019	0.1613	0.0017	0.41945	966.4	7.3	964.0	9.2	977.0	16.0	964.0	9.2	0.2
11USS07_104	163	1.357	1.911	0.022	0.1831	0.0020	0.6488	1085.5	7.7	1084.0	11.0	1094.2	9.6	1084.0	11.0	0.1
11USS07_105	38.6	0.831	1.975	0.033	0.1827	0.0026	0.40802	1106.0	11.0	1084.0	14.0	1164.0	15.0	1084.0	14.0	2.0
11USS07_106	212.4	1.841	4.028	0.021	0.2919	0.0017	0.30728	1639.7	4.3	1651.0	8.5	1629.1	6.6	1629.1	6.6	1.3
11USS07_107	77.5	0.871	3.109	0.024	0.2491	0.0017	0.094075	1434.5	5.9	1433.8	9.0	1443.0	9.6	1443.0	9.6	0.6
11USS07_108	85.7	1.741	2.419	0.031	0.2117	0.0017	0.1885	1247.5	9.2	1237.8	9.2	1271.0	19.0	1271.0	19.0	2.6

11USS07_109	168	0.662	0.239	0.005	0.0346	0.0005	0.29067	217.8	4.1	219.0	3.1	237.0	31.0	219.0	3.1	0.6
11USS07_110	211.3	1.138	5.290	0.120	0.3326	0.0031	0.7103	1863.0	18.0	1851.0	15.0	1875.0	25.0	1875.0	25.0	1.3
11USS07_112	387	13.4	4.746	0.099	0.3178	0.0071	0.97781	1767.0	21.0	1777.0	35.0	1777.5	9.3	1777.5	9.3	0.0
11USS07_113	61.6	1.199	1.742	0.020	0.1725	0.0016	0.46001	1023.5	7.6	1025.6	8.6	1024.0	12.0	1025.6	8.6	0.2
11USS07_114	34.1	1.26	1.675	0.039	0.1656	0.0023	0.32421	999.0	14.0	988.0	13.0	1019.0	27.0	988.0	13.0	1.1
11USS07_115	149.1	0.815	0.102	0.015	0.0115	0.0003	0.8347	93.1	8.3	73.4	1.9	480.0	63.0	73.4	1.9	21.2
11USS07_116	155.3	1.078	0.842	0.013	0.1022	0.0015	0.6452	620.0	7.0	627.2	9.0	627.0	20.0	627.2	9.0	1.2
11USS07_117	380	1.006	3.256	0.034	0.2524	0.0023	0.64392	1471.5	8.3	1451.0	12.0	1498.0	12.0	1498.0	12.0	3.1
11USS07_118	232.6	1.25	1.693	0.024	0.1623	0.0038	0.72694	1006.2	9.3	969.0	21.0	1085.0	22.0	969.0	21.0	3.7
11USS07_119	192	1.766	1.761	0.057	0.1701	0.0033	0.036768	1027.0	20.0	1012.0	18.0	1084.0	45.0	1012.0	18.0	1.5
11USS07_120	245	4.78	1.861	0.042	0.1778	0.0015	0.31359	1065.0	14.0	1055.0	8.0	1134.0	37.0	1055.0	8.0	0.9
11USS07_121	67.3	0.76	4.725	0.051	0.3034	0.0033	0.598	1771.1	9.1	1708.0	17.0	1854.0	11.0	1854.0	11.0	7.9

Table 2b: Green River Canyon, UT

Sample Name:								**207/235**		**206/238**		**206/207**		**Best age**		
Grain #	**[U] ppm**	**U/Th**	**207/235**	**2σ error**	**206/238**	**2σ error**	**RHO**	**Age Ma**	**2σ error**	**Age (Ma)**	**2σ error**	**Age (Ma)**	**2σ error**	**(Ma)**	**2σ error**	**% Discordance***
Bluecastle_1	49.7	1.011	0.074	0.007	0.0110	0.0004	0.034559	72.5	6.3	70.4	2.7	160.0	170.0	70.4	2.7	2.9
Bluecastle_2	368	7.19	2.180	0.023	0.1902	0.0023	0.56206	1175.1	7.0	1122.0	13.0	1274.0	22.0	1122.0	13.0	4.5
Bluecastle_3	225	0.749	2.987	0.026	0.2392	0.0021	0.23072	1404.0	6.7	1382.0	11.0	1436.0	15.0	1436.0	15.0	3.8
Bluecastle_4	200	1.9	0.080	0.006	0.0114	0.0003	0.048406	78.3	5.8	73.3	2.0	210.0	160.0	73.3	2.0	6.4
Bluecastle_5	67.8	1.302	1.744	0.029	0.1697	0.0025	0.21018	1026.0	11.0	1010.0	14.0	1057.0	40.0	1010.0	14.0	1.6
Bluecastle_6	130	2.379	1.740	0.024	0.1721	0.0015	0.40149	1022.7	8.7	1023.5	8.2	1039.0	25.0	1023.5	8.2	0.1
Bluecastle_7	196	4.41	4.055	0.061	0.2870	0.0042	0.6009	1645.0	12.0	1626.0	21.0	1685.0	23.0	1685.0	23.0	3.5
Bluecastle_8	51	0.951	0.154	0.015	0.0212	0.0007	0.071546	144.0	13.0	135.2	4.2	270.0	190.0	135.2	4.2	6.1
Bluecastle_9	127.9	1.689	2.544	0.028	0.2089	0.0020	0.56135	1285.3	7.9	1223.0	11.0	1401.0	19.0	1401.0	19.0	12.7
Bluecastle_10	60.5	1.138	12.270	0.120	0.4767	0.0054	0.63147	2624.3	9.1	2512.0	23.0	2723.0	16.0	2723.0	16.0	7.7
Bluecastle_11	206	0.8149	0.388	0.009	0.0524	0.0010	0.38068	332.6	6.8	329.2	6.2	380.0	65.0	329.2	6.2	1.0
Bluecastle_12	39.7	1.448	2.241	0.050	0.1860	0.0031	0.47443	1194.0	15.0	1099.0	17.0	1395.0	39.0	1099.0	17.0	8.0
Bluecastle_14	192.6	1.73	1.912	0.038	0.1704	0.0035	0.87748	1084.0	13.0	1014.0	19.0	1245.0	19.0	1014.0	19.0	6.5
Bluecastle_15	338	1.567	0.072	0.002	0.0106	0.0002	0.092776	70.3	2.2	68.0	1.5	139.0	77.0	68.0	1.5	3.3
Bluecastle_16	82.3	0.3897	1.037	0.018	0.0347	0.0008	0.43487	723.0	8.8	219.8	4.8	2954.0	35.0	DISC	DISC	69.6

Bluecastle_17	45.2	0.841	0.077	0.006	0.0114	0.0004	0.25248	76.3	6.2	73.3	2.7	180.0	170.0	73.3	2.7	3.9
Bluecastle_18	94.5	1.291	2.887	0.042	0.2356	0.0033	0.33506	1378.0	11.0	1364.0	17.0	1427.0	35.0	1427.0	35.0	4.4
Bluecastle_19	95	1.92	1.770	0.033	0.1727	0.0029	0.44947	1036.0	13.0	1027.0	16.0	1063.0	40.0	1027.0	16.0	0.9
Bluecastle_20	164.2	0.837	0.184	0.005	0.0264	0.0004	0.016774	170.9	3.9	168.0	2.6	183.0	58.0	168.0	2.6	1.7
Bluecastle_21	171.5	1.138	0.093	0.004	0.0136	0.0003	0.34101	90.1	4.1	87.2	1.7	144.0	87.0	87.2	1.7	3.2
Bluecastle_22	86.5	0.4737	0.141	0.008	0.0196	0.0007	0.092306	133.6	6.8	125.0	4.4	270.0	150.0	125.0	4.4	6.4
Bluecastle_23	157.4	2.379	4.503	0.040	0.2980	0.0027	0.40567	1729.7	6.8	1681.0	13.0	1784.0	16.0	1784.0	16.0	5.8
Bluecastle_24	214.2	0.5633	0.168	0.007	0.0240	0.0006	0.095029	157.7	5.7	152.6	3.7	227.0	81.0	152.6	3.7	3.2
Bluecastle_25	90.8	0.9751	0.850	0.012	0.1003	0.0011	0.1904	624.3	6.8	616.0	6.3	659.0	38.0	616.0	6.3	1.3
Bluecastle_26	164	1.3	0.361	0.009	0.0478	0.0007	0.076037	312.5	6.6	301.1	4.1	379.0	55.0	301.1	4.1	3.6
Bluecastle_27	188	2.489	0.446	0.019	0.0590	0.0017	0.40288	374.0	13.0	369.0	10.0	353.0	78.0	369.0	10.0	1.3
Bluecastle_27	89.2	0.535	1.640	0.041	0.1596	0.0029	0.6195	985.0	16.0	954.0	16.0	1056.0	49.0	954.0	16.0	3.1
Bluecastle_28	59.8	1.508	1.979	0.051	0.1619	0.0039	0.59571	1107.0	17.0	967.0	22.0	1383.0	44.0	967.0	22.0	12.6
Bluecastle_28	32.3	1.257	2.500	0.110	0.1991	0.0054	0.089308	1270.0	30.0	1170.0	29.0	1395.0	93.0	1170.0	29.0	7.9
Bluecastle_29	142.1	0.7649	4.190	0.048	0.2675	0.0031	0.63056	1671.5	9.5	1528.0	16.0	1853.0	18.0	1853.0	18.0	17.5
Bluecastle_30	67.6	0.934	0.070	0.004	0.0105	0.0003	0.067571	68.9	3.6	67.0	1.7	150.0	120.0	67.0	1.7	2.8
Bluecastle_31	372	1.13	0.507	0.016	0.0631	0.0006	0.15401	411.6	5.9	394.6	3.9	501.0	44.0	394.6	3.9	4.1
Bluecastle_32	105.9	1.946	1.601	0.024	0.1552	0.0017	0.4614	970.2	9.2	930.2	9.6	1044.0	29.0	930.2	9.6	4.1
Bluecastle_33	48.8	0.893	0.108	0.013	0.0112	0.0004	0.2924	103.0	12.0	71.7	2.7	780.0	210.0	DISC	DISC	30.4
Bluecastle_34	157.6	1.77	5.016	0.090	0.3205	0.0064	0.70244	1826.0	14.0	1791.0	31.0	1856.0	25.0	1856.0	25.0	3.5
Bluecastle_35	197	1.157	0.077	0.004	0.0106	0.0002	0.1212	74.9	3.7	67.8	1.5	310.0	120.0	67.8	1.5	9.5
Bluecastle_36	106.7	0.802	2.322	0.057	0.1892	0.0032	0.72004	1218.0	17.0	1117.0	17.0	1387.0	36.0	1117.0	17.0	8.3
Bluecastle_37	227.5	3.5	3.543	0.049	0.2458	0.0032	0.74947	1538.0	11.0	1416.0	16.0	1696.0	16.0	1696.0	16.0	16.5
Bluecastle_39	70.7	2.44	1.703	0.023	0.1666	0.0019	0.49035	1009.2	8.7	993.0	10.0	1034.0	29.0	993.0	10.0	1.6
Bluecastle_40	192	0.876	0.275	0.009	0.0363	0.0007	0.19659	246.3	6.8	229.8	4.1	394.0	83.0	229.8	4.1	6.7
Bluecastle_41	188.6	1.447	1.693	0.041	0.1591	0.0016	0.68013	1002.0	14.0	951.7	8.8	1105.0	36.0	951.7	8.8	5.0
Bluecastle_42	621	7.58	3.948	0.073	0.2670	0.0065	0.88753	1623.0	15.0	1524.0	33.0	1753.0	18.0	1753.0	18.0	13.1
Bluecastle_43	43.31	1.164	5.060	0.120	0.3076	0.0074	0.79579	1828.0	20.0	1727.0	37.0	1925.0	33.0	1925.0	33.0	10.3
Bluecastle_44	446	1.809	0.437	0.005	0.0548	0.0006	0.014362	368.0	3.2	343.9	3.5	508.0	33.0	343.9	3.5	6.5
Bluecastle_45	529	0.8314	0.092	0.002	0.0137	0.0002	0.33579	89.9	1.9	87.9	1.5	165.0	56.0	87.9	1.5	2.2
Bluecastle_45	1112	1.039	0.100	0.003	0.0126	0.0003	0.4521	97.0	2.4	80.4	1.7	539.0	81.0	80.4	1.7	17.1
Bluecastle_46	321	1.17	0.075	0.002	0.0114	0.0002	0.21072	73.5	2.0	72.8	1.2	67.0	53.0	72.8	1.2	1.0
Bluecastle_47	98.1	1.254	4.214	0.041	0.2797	0.0026	0.59469	1676.1	7.9	1589.0	13.0	1793.0	15.0	1793.0	15.0	11.4
Bluecastle_48	77.6	0.971	2.134	0.023	0.1904	0.0023	0.42025	1160.4	7.6	1125.0	12.0	1228.0	24.0	1125.0	12.0	3.1
Bluecastle_49	85.4	1.362	1.750	0.023	0.1692	0.0019	0.50877	1026.4	8.4	1008.0	11.0	1078.0	23.0	1008.0	11.0	1.8

Bluecastle_50	152.9	1.374	0.195	0.005	0.0274	0.0005	0.12025	180.3	4.4	174.2	3.0	233.0	57.0	174.2	3.0	3.4
Bluecastle_51	71.6	1.918	1.612	0.024	0.1581	0.0019	0.26414	974.1	9.1	946.0	11.0	1026.0	31.0	946.0	11.0	2.9
Bluecastle_52	76.3	1.526	0.563	0.019	0.0742	0.0016	0.12945	453.0	12.0	461.3	9.7	413.0	72.0	461.3	9.7	1.8
Bluecastle_53	277	1.242	0.093	0.003	0.0144	0.0003	0.27012	90.2	2.6	92.2	1.7	56.0	63.0	92.2	1.7	2.2
Bluecastle_54	42.2	0.679	0.168	0.012	0.0236	0.0009	0.093642	161.0	11.0	150.5	5.4	320.0	160.0	150.5	5.4	6.5
Bluecastle_55	34.19	0.877	0.170	0.021	0.0227	0.0014	0.29868	159.0	18.0	144.8	8.7	420.0	270.0	144.8	8.7	8.9
Bluecastle_56	192.9	1.278	0.172	0.005	0.0248	0.0005	0.069603	161.0	4.1	157.7	3.0	202.0	77.0	157.7	3.0	2.0
Bluecastle_57	71.7	0.423	2.203	0.036	0.1991	0.0031	0.39227	1181.0	11.0	1170.0	17.0	1215.0	32.0	1170.0	17.0	0.9
Bluecastle_58	278	3.02	4.466	0.034	0.3008	0.0027	0.72232	1724.3	6.3	1697.0	13.0	1770.0	12.0	1770.0	12.0	4.1
Bluecastle_59	87	1.162	1.775	0.025	0.1708	0.0018	0.53234	1035.7	9.1	1016.5	9.7	1084.0	24.0	1016.5	9.7	1.9
Bluecastle_60	45	5.173	2.788	0.035	0.2258	0.0026	0.33438	1351.4	9.3	1314.0	13.0	1445.0	28.0	1445.0	28.0	9.1
Bluecastle_61	86.6	2.083	2.883	0.039	0.2324	0.0034	0.58552	1377.0	10.0	1347.0	18.0	1446.0	25.0	1446.0	25.0	6.8
Bluecastle_62	102.6	0.727	0.072	0.005	0.0109	0.0003	0.39157	70.5	4.7	69.9	2.0	110.0	140.0	69.9	2.0	0.9
Bluecastle_63	5.91	1.853	8.380	0.330	0.2618	0.0097	0.49461	2273.0	36.0	1497.0	50.0	3062.0	71.0	DISC	DISC	51.1
Bluecastle_64	59.9	1.169	2.290	0.037	0.1917	0.0026	0.59104	1209.0	11.0	1132.0	14.0	1368.0	26.0	1132.0	14.0	6.4
Bluecastle_65	139.2	1.307	2.505	0.044	0.1991	0.0036	0.84062	1274.0	13.0	1170.0	19.0	1462.0	16.0	1170.0	19.0	8.2
Bluecastle_67	170	1.178	3.171	0.025	0.2463	0.0020	0.53714	1449.7	6.1	1419.0	11.0	1519.0	16.0	1519.0	16.0	6.6
Bluecastle_68	84.5	1.66	0.098	0.005	0.0152	0.0004	0.061855	94.4	4.4	97.1	2.6	80.0	110.0	97.1	2.6	2.9
Bluecastle_69	116	1.288	1.893	0.023	0.1766	0.0021	0.4912	1078.1	8.1	1049.0	11.0	1156.0	21.0	1049.0	11.0	2.7
Bluecastle_70	149	1.069	0.252	0.006	0.0365	0.0005	0.068166	227.9	4.8	231.3	2.9	232.0	62.0	231.3	2.9	1.5
Bluecastle_71	298	0.897	0.094	0.003	0.0142	0.0002	0.038271	91.1	2.4	91.0	1.2	133.0	57.0	91.0	1.2	0.1
Bluecastle_72	303	1.339	2.010	0.014	0.1909	0.0011	0.30725	1119.5	5.0	1126.1	5.8	1130.0	15.0	1126.1	5.8	0.6
Bluecastle_73	59.4	0.99	6.301	0.064	0.3586	0.0037	0.50845	2021.0	8.9	1975.0	18.0	2079.0	19.0	2079.0	19.0	5.0
Bluecastle_74	204	0.3275	0.847	0.012	0.1020	0.0010	0.17079	622.3	6.9	625.9	6.1	633.0	29.0	625.9	6.1	0.6
Bluecastle_75	51.5	1.041	0.250	0.230	0.0124	0.0009	0.30953	180.0	130.0	79.4	6.0	720.0	830.0	DISC	DISC	55.9
Bluecastle_75	126	0.529	4.320	0.080	0.3040	0.0064	0.87744	1699.0	14.0	1710.0	32.0	1684.0	16.0	1684.0	16.0	1.5
Bluecastle_76	136.8	0.732	0.542	0.009	0.0693	0.0007	0.30164	439.1	5.8	431.7	4.3	490.0	39.0	431.7	4.3	1.7
Bluecastle_77	97	0.718	0.104	0.009	0.0128	0.0004	0.21929	100.4	8.6	81.8	2.8	550.0	160.0	81.8	2.8	18.5
Bluecastle_78	212	1.919	0.567	0.008	0.0735	0.0009	0.53329	455.7	5.1	457.2	5.3	485.0	30.0	457.2	5.3	0.3
Bluecastle_79	468	1.042	0.179	0.003	0.0264	0.0003	0.2205	167.3	2.6	168.2	1.6	164.0	37.0	168.2	1.6	0.5
Bluecastle_80	427	1.441	0.157	0.005	0.0221	0.0004	0.16754	148.1	4.1	140.7	2.5	260.0	56.0	140.7	2.5	5.0
Bluecastle_81	80.3	1.288	1.636	0.022	0.1583	0.0019	0.3847	985.2	8.2	947.0	10.0	1067.0	28.0	947.0	10.0	3.9
Bluecastle_82	165.3	0.892	0.761	0.011	0.0931	0.0009	0.43303	575.0	6.2	574.0	5.0	581.0	30.0	574.0	5.0	0.2
Bluecastle_83	165	0.937	0.165	0.008	0.0221	0.0005	0.00065018	154.7	6.7	141.2	3.1	400.0	110.0	141.2	3.1	8.7
Bluecastle_84	251	1.617	0.245	0.005	0.0347	0.0004	0.12146	222.1	4.4	220.0	2.6	256.0	53.0	220.0	2.6	0.9

Bluecastle_85	153	1.593	1.780	0.021	0.1731	0.0015	0.072986	1037.5	7.6	1029.1	8.2	1059.0	24.0	1029.1	8.2	0.8
Bluecastle_86	11.05	1.424	1.639	0.053	0.1507	0.0054	0.21601	983.0	20.0	904.0	30.0	1181.0	92.0	904.0	30.0	8.0
Bluecastle_87	52.6	0.3553	0.168	0.010	0.0229	0.0007	0.1224	157.2	8.8	146.0	4.5	280.0	140.0	146.0	4.5	7.1
Bluecastle_88	283	0.68	0.098	0.004	0.0145	0.0007	0.64082	94.7	4.0	92.6	4.2	141.0	75.0	92.6	4.2	2.2
Bluecastle_90	35.2	0.912	13.130	0.180	0.5034	0.0064	0.59294	2688.0	13.0	2628.0	27.0	2744.0	19.0	2744.0	19.0	4.2
Bluecastle_91	87.4	1.154	3.807	0.040	0.2707	0.0027	0.48932	1595.7	8.8	1544.0	14.0	1675.0	19.0	1675.0	19.0	7.8
Bluecastle_92	39.45	1.25	2.929	0.061	0.2344	0.0027	0.080251	1388.0	16.0	1357.0	14.0	1432.0	46.0	1432.0	46.0	5.2
Bluecastle_93	164.9	1.609	4.410	0.120	0.2795	0.0061	0.68354	1713.0	23.0	1588.0	31.0	1885.0	30.0	1885.0	30.0	15.8
Bluecastle_94	204	6.17	3.026	0.020	0.2406	0.0016	0.39158	1414.6	5.2	1389.6	8.4	1446.0	15.0	1446.0	15.0	3.9
Bluecastle_95	67	2.21	0.546	0.013	0.0692	0.0014	0.22579	442.7	8.3	431.1	8.3	487.0	60.0	431.1	8.3	2.6
Bluecastle_96	66.3	1.553	7.860	0.110	0.3978	0.0050	0.79679	2215.0	13.0	2158.0	23.0	2272.0	18.0	2272.0	18.0	5.0
Bluecastle_97	231	1.299	1.528	0.019	0.1502	0.0015	0.6097	943.3	7.5	902.0	8.7	1030.0	19.0	902.0	8.7	4.4
Bluecastle_98	606	1.369	0.077	0.003	0.0115	0.0002	0.19467	74.9	2.7	73.5	1.2	133.0	83.0	73.5	1.2	1.9
Bluecastle_99	45.1	1.367	2.607	0.045	0.2127	0.0039	0.20306	1302.0	13.0	1243.0	21.0	1394.0	40.0	1394.0	40.0	10.8
Bluecastle_100	185	1.433	0.468	0.014	0.0609	0.0012	0.50607	391.5	9.3	381.0	7.1	437.0	58.0	381.0	7.1	2.7
Bluecastle_101	41.6	0.613	2.500	0.036	0.2089	0.0021	0.27464	1271.0	11.0	1223.0	11.0	1378.0	30.0	1378.0	30.0	11.2
Bluecastle_102	378	45.9	1.827	0.016	0.1751	0.0015	0.59443	1055.8	5.8	1040.1	8.0	1086.0	16.0	1040.1	8.0	1.5
Bluecastle_103	114	1.279	2.978	0.029	0.2384	0.0020	0.43375	1402.4	7.6	1378.0	10.0	1448.0	18.0	1448.0	18.0	4.8
Bluecastle_104	184	0.579	0.530	0.090	0.0270	0.0010	0.90443	432.0	59.0	171.7	6.6	1960.0	240.0	DISC	DISC	60.3
Bluecastle_105	245.6	1.584	4.338	0.087	0.2847	0.0030	0.14586	1701.0	17.0	1615.0	15.0	1810.0	37.0	1810.0	37.0	10.8
Bluecastle_106	37.8	2.99	2.560	0.100	0.2123	0.0067	0.59834	1285.0	30.0	1240.0	36.0	1346.0	64.0	1346.0	64.0	7.9
Bluecastle_107	120.5	1.961	0.523	0.012	0.0690	0.0007	0.31651	426.6	7.6	429.9	4.1	396.0	48.0	429.9	4.1	0.8
Bluecastle_109	37.1	2.267	4.910	0.100	0.3151	0.0048	0.29155	1802.0	18.0	1765.0	24.0	1841.0	44.0	1841.0	44.0	4.1
Bluecastle_110	130.4	0.435	0.356	0.042	0.0267	0.0005	0.70043	300.0	31.0	169.9	3.4	1300.0	200.0	DISC	DISC	43.4
Bluecastle_111	121.3	1.44	2.656	0.026	0.2193	0.0028	0.48372	1316.0	7.2	1278.0	15.0	1368.0	24.0	1368.0	24.0	6.6
Bluecastle_112	217.1	0.3945	0.097	0.004	0.0144	0.0002	0.029801	94.1	3.3	92.3	1.5	140.0	72.0	92.3	1.5	1.9
Bluecastle_113	47.7	0.748	0.735	0.018	0.0912	0.0014	0.22127	559.0	10.0	562.6	8.4	526.0	59.0	562.6	8.4	0.6
Bluecastle_114	126.9	0.847	0.512	0.047	0.0250	0.0006	0.38306	415.0	31.0	159.4	3.9	2240.0	150.0	DISC	DISC	61.6
Bluecastle_115	244	1.149	0.172	0.008	0.0229	0.0004	0.53022	161.1	6.9	146.2	2.7	385.0	85.0	146.2	2.7	9.2
Bluecastle_116	94.8	0.989	1.849	0.030	0.1754	0.0021	0.36795	1062.0	10.0	1041.0	12.0	1085.0	35.0	1041.0	12.0	2.0
Bluecastle_117	163.1	1.933	2.001	0.022	0.1837	0.0015	0.52336	1115.3	7.4	1087.2	8.3	1166.0	19.0	1087.2	8.3	2.5
Bluecastle_118	186	1.318	1.915	0.023	0.1838	0.0018	0.56973	1085.8	7.9	1087.4	9.7	1078.0	20.0	1087.4	9.7	0.1
Bluecastle_119	180.9	1.24	3.072	0.025	0.2436	0.0016	0.52302	1426.1	6.0	1405.4	8.1	1440.0	14.0	1440.0	14.0	2.4
Bluecastle_120	131	0.668	0.170	0.004	0.0246	0.0005	0.026795	159.3	3.8	156.7	2.9	197.0	66.0	156.7	2.9	1.6
Bluecastle_121	107.5	0.526	0.155	0.006	0.0223	0.0006	0.16936	146.3	5.6	142.2	3.5	207.0	89.0	142.2	3.5	2.8

13GRT01_1	62.7	1.428	1.642	0.013	0.1661	0.0011	0.28663	986.4	4.9	991.6	6.5	978.0	11.0	991.6	6.5	0.5
13GRT01_2	191	1.657	4.956	0.040	0.3245	0.0030	0.74505	1812.3	6.9	1811.0	15.0	1812.8	7.9	1812.8	7.9	0.1
13GRT01_3	56.9	0.672	14.370	0.150	0.5476	0.0053	0.36122	2773.0	10.0	2814.0	22.0	2754.9	7.8	2754.9	7.8	2.1
13GRT01_4	119.7	0.767	3.158	0.029	0.2422	0.0018	0.72599	1446.6	7.0	1397.9	9.2	1523.2	9.2	1523.2	9.2	8.2
13GRT01_5	116.9	1.222	0.909	0.007	0.1095	0.0008	0.37211	656.4	4.0	669.6	4.7	620.0	11.0	669.6	4.7	2.0
13GRT01_6	211	1.74	1.790	0.017	0.1791	0.0016	0.65595	1041.7	6.1	1062.2	8.9	1008.5	8.9	1062.2	8.9	2.0
13GRT01_7	234	1.732	1.466	0.018	0.1454	0.0015	0.83309	916.2	7.3	875.0	8.7	1019.1	8.9	875.0	8.7	4.5
13GRT01_8	42.9	0.766	12.130	0.100	0.4443	0.0035	0.44278	2614.4	7.7	2369.0	16.0	2809.4	9.5	2809.4	9.5	15.7
13GRT01_9	58.7	1.257	1.846	0.015	0.1840	0.0013	0.51297	1061.8	5.3	1088.7	7.0	1006.0	11.0	1088.7	7.0	2.5
13GRT01_10	399	1.009	0.100	0.001	0.0151	0.0002	0.37378	96.7	1.2	96.8	1.1	122.0	15.0	96.8	1.1	0.1
13GRT01_11	77.4	0.483	13.746	0.076	0.5320	0.0033	0.73003	2733.5	5.5	2750.0	14.0	2725.4	5.1	2725.4	5.1	0.9
13GRT01_12	297	1.118	0.103	0.001	0.0155	0.0002	0.34713	99.9	1.2	99.2	1.0	125.0	19.0	99.2	1.0	0.7
13GRT01_13	175	1.835	3.291	0.025	0.2610	0.0016	0.75703	1478.6	6.1	1494.6	8.3	1449.9	7.3	1449.9	7.3	3.1
13GRT01_14	15.2	0.671	4.149	0.057	0.2955	0.0037	0.13311	1663.0	11.0	1669.0	19.0	1656.0	12.0	1656.0	12.0	0.8
13GRT01_15	55.12	2.205	14.852	0.081	0.5471	0.0039	0.62838	2805.5	5.2	2813.0	16.0	2803.9	5.5	2803.9	5.5	0.3
13GRT01_16	866	1.6	0.101	0.002	0.0144	0.0001	0.15696	97.2	1.4	92.2	0.8	220.0	30.0	92.2	0.8	5.1
13GRT01_17	63.2	0.666	3.635	0.025	0.2718	0.0020	0.53017	1557.8	5.7	1550.0	10.0	1556.2	7.9	1556.2	7.9	0.4
13GRT01_18	231	1.888	0.116	0.004	0.0162	0.0002	0.21518	111.7	3.8	103.7	1.0	323.0	76.0	103.7	1.0	7.1
13GRT01_19	40.15	1.357	0.682	0.011	0.0864	0.0010	0.029893	527.6	6.5	534.4	5.8	500.0	23.0	534.4	5.8	1.3
13GRT01_20	172.7	0.695	13.710	0.180	0.5218	0.0054	0.84082	2729.0	13.0	2706.0	23.0	2758.0	7.3	2758.0	7.3	1.9
13GRT01_21	53.7	0.958	4.262	0.049	0.2998	0.0029	0.53627	1685.2	9.4	1690.0	14.0	1684.0	13.0	1684.0	13.0	0.4
13GRT01_22	59	1.765	13.693	0.083	0.5397	0.0039	0.74342	2728.4	5.7	2782.0	16.0	2688.7	5.5	2688.7	5.5	3.5
13GRT01_23	228.7	1.063	0.510	0.006	0.0671	0.0006	0.48622	418.6	4.2	418.4	3.7	420.0	14.0	418.4	3.7	0.0
13GRT01_24	397	1.809	0.111	0.003	0.0164	0.0003	0.397	106.8	2.3	104.7	1.7	177.0	23.0	104.7	1.7	2.0
13GRT01_25	470	12.1	0.467	0.008	0.0616	0.0010	0.55273	390.1	5.0	385.3	6.2	434.0	13.0	385.3	6.2	1.2
13GRT01_26	413	1.468	0.098	0.002	0.0143	0.0003	0.44776	95.3	1.7	91.7	2.1	205.0	35.0	91.7	2.1	3.8
13GRT01_27	163	1.304	0.096	0.002	0.0149	0.0001	0.079651	92.9	1.8	95.6	0.9	120.0	21.0	95.6	0.9	2.9
13GRT01_28	182.6	3.29	4.920	0.095	0.2824	0.0033	0.15086	1804.0	16.0	1603.0	17.0	2016.0	42.0	2016.0	42.0	20.5
13GRT01_29	153.1	0.733	0.104	0.002	0.0157	0.0002	0.36268	100.4	1.9	100.3	1.2	158.0	26.0	100.3	1.2	0.1
13GRT01_30	23.5	0.513	7.540	0.650	0.2380	0.0078	0.92635	2141.0	84.0	1375.0	41.0	3004.0	97.0	DISC	DISC	54.2
13GRT01_31	78.2	1.513	2.105	0.017	0.2000	0.0017	0.48294	1150.2	5.4	1175.4	9.1	1114.7	9.7	1175.4	9.1	2.2
13GRT01_32	26.25	0.519	1.947	0.028	0.1860	0.0019	0.21907	1098.8	9.2	1099.0	10.0	1103.0	17.0	1099.0	10.0	0.0
13GRT01_33	527	5.8	4.280	0.150	0.2733	0.0070	0.70514	1694.0	31.0	1557.0	35.0	1908.0	55.0	1908.0	55.0	18.4

13GRT01_33	284.9	1.728	11.390	0.130	0.4699	0.0057	0.75496	2555.0	11.0	2483.0	25.0	2611.0	10.0	2611.0	10.0	4.9
13GRT01_34	270.1	5.73	4.662	0.040	0.3157	0.0028	0.6797	1760.1	7.2	1769.0	14.0	1752.0	14.0	1752.0	14.0	1.0
13GRT01_34	53	2.35	6.548	0.080	0.3813	0.0051	0.44829	2052.0	11.0	2082.0	24.0	2027.0	20.0	2027.0	20.0	2.7
13GRT01_35	154.3	31.3	1.821	0.011	0.1816	0.0012	0.47246	1052.8	3.9	1075.7	6.5	1012.5	8.3	1075.7	6.5	2.2
13GRT01_36	403	3.551	0.112	0.001	0.0169	0.0002	0.50889	107.9	1.2	107.7	1.1	124.0	16.0	107.7	1.1	0.2
13GRT01_37	60.9	0.852	4.107	0.031	0.2929	0.0025	0.60791	1655.5	6.1	1656.0	13.0	1657.7	7.7	1657.7	7.7	0.1
13GRT01_38	186.2	1.91	1.866	0.010	0.1856	0.0011	0.54761	1069.1	3.7	1097.6	6.0	1012.3	8.2	1097.6	6.0	2.7
13GRT01_39	60.4	1.219	3.294	0.032	0.2629	0.0022	0.71075	1479.2	7.7	1504.0	11.0	1434.0	11.0	1434.0	11.0	4.9
13GRT01_40	72.6	1.831	14.204	0.095	0.5455	0.0049	0.51822	2764.0	6.2	2806.0	20.0	2738.3	7.5	2738.3	7.5	2.5
13GRT01_41	522	1.156	0.101	0.001	0.0153	0.0001	0.42968	97.2	1.2	97.7	0.9	109.0	14.0	97.7	0.9	0.5
13GRT01_42	88.3	2.59	2.631	0.043	0.2258	0.0029	0.88189	1308.0	12.0	1314.0	15.0	1297.1	9.1	1297.1	9.1	1.3
13GRT01_43	114.3	1.192	5.079	0.027	0.3377	0.0019	0.51808	1832.4	4.6	1875.6	9.2	1779.9	5.6	1779.9	5.6	5.4
13GRT01_44	228	0.825	0.089	0.002	0.0133	0.0001	0.39688	86.2	1.7	85.2	0.9	125.0	20.0	85.2	0.9	1.2
13GRT01_45	20.5	2.08	5.000	0.120	0.3341	0.0065	0.45918	1819.0	19.0	1858.0	31.0	1785.0	24.0	1785.0	24.0	4.1
13GRT01_45	72.2	0.609	9.540	0.110	0.4525	0.0044	0.77953	2390.0	10.0	2406.0	20.0	2377.6	8.6	2377.6	8.6	1.2
13GRT01_46	111.3	0.391	13.080	0.099	0.5063	0.0038	0.80825	2686.9	7.4	2640.0	16.0	2718.9	5.4	2718.9	5.4	2.9
13GRT01_47	34.17	1.435	1.730	0.017	0.1690	0.0013	0.50754	1020.2	6.3	1006.7	7.2	1044.0	10.0	1006.7	7.2	1.3
13GRT01_48	351	5.65	0.536	0.005	0.0655	0.0010	0.095947	435.7	3.2	408.7	5.8	585.0	38.0	408.7	5.8	6.2
13GRT01_49	542	1.876	0.120	0.001	0.0179	0.0002	0.40608	114.8	1.1	114.2	1.0	123.0	13.0	114.2	1.0	0.5
13GRT01_50	298	10.58	1.685	0.028	0.1667	0.0026	0.91125	1002.0	10.0	994.0	14.0	1023.0	8.2	994.0	14.0	0.8
13GRT01_50	32.6	2.18	2.635	0.088	0.2174	0.0032	0.74519	1308.0	25.0	1268.0	17.0	1370.0	44.0	1370.0	44.0	7.4
13GRT01_51	122.9	1.38	0.737	0.008	0.0913	0.0007	0.31663	560.2	4.4	563.4	4.0	545.0	15.0	563.4	4.0	0.6
13GRT01_52	186	0.954	0.101	0.002	0.0157	0.0002	0.043609	97.4	1.6	100.3	1.2	114.0	21.0	100.3	1.2	3.0
13GRT01_53	71.7	0.84	2.674	0.019	0.2264	0.0015	0.46236	1320.9	5.2	1315.6	7.6	1331.7	8.0	1331.7	8.0	1.2
13GRT01_54	321	3.67	2.234	0.017	0.2031	0.0018	0.86702	1191.4	5.4	1191.7	9.8	1189.8	5.9	1191.7	9.8	0.0
13GRT01_55	68.7	1.239	5.231	0.035	0.3392	0.0026	0.63516	1857.4	5.7	1883.0	13.0	1830.4	5.7	1830.4	5.7	2.9
13GRT01_56	319	0.966	0.106	0.001	0.0159	0.0001	0.33263	102.6	1.3	101.7	0.8	137.0	16.0	101.7	0.8	0.9
13GRT01_57	406	1.706	0.344	0.003	0.0477	0.0004	0.52642	300.5	2.3	300.4	2.2	310.8	9.2	300.4	2.2	0.0
13GRT01_58	241	1.225	1.644	0.024	0.1599	0.0021	0.92919	987.0	9.1	956.0	12.0	1055.4	8.7	956.0	12.0	3.1
13GRT01_59	514	1.446	0.095	0.001	0.0144	0.0001	0.30808	91.8	1.1	92.3	0.7	95.0	14.0	92.3	0.7	0.5
13GRT01_60	222	1.4	0.993	0.018	0.1137	0.0018	0.97854	699.7	9.6	694.0	10.0	713.0	12.0	694.0	10.0	0.8
13GRT01_61	348	1.184	0.102	0.002	0.0156	0.0002	0.20059	98.1	1.7	99.9	1.1	97.0	19.0	99.9	1.1	1.8
13GRT01_62	157.4	0.63	4.033	0.028	0.2895	0.0020	0.71085	1641.2	5.8	1638.9	9.8	1642.4	6.9	1642.4	6.9	0.2
13GRT01_63	76	1.124	4.196	0.028	0.3040	0.0020	0.53773	1673.1	5.5	1711.0	10.0	1626.2	7.5	1626.2	7.5	5.2
13GRT01_64	526	0.63	10.560	0.160	0.3569	0.0049	0.9403	2483.0	14.0	1967.0	23.0	2933.7	5.5	DISC	DISC	33.0

13GRT01_65	69	0.907	2.073	0.014	0.1945	0.0012	0.29428	1139.7	4.5	1145.7	6.7	1125.4	8.2	1145.7	6.7	0.5
13GRT01_66	312	1.235	0.480	0.014	0.0629	0.0019	0.64124	397.3	9.7	393.0	12.0	449.0	15.0	393.0	12.0	1.1
13GRT01_67	93	1.637	2.726	0.022	0.2356	0.0020	0.62899	1336.1	6.2	1367.0	10.0	1301.4	9.6	1301.4	9.6	5.0
13GRT01_68	229	1.595	3.315	0.023	0.2595	0.0018	0.58381	1484.3	5.3	1488.7	9.1	1472.0	8.3	1472.0	8.3	1.1
13GRT01_69	432.6	2.53	1.945	0.019	0.1800	0.0019	0.64236	1096.6	6.5	1067.0	10.0	1150.9	9.9	1067.0	10.0	2.7
13GRT01_70	175	2.27	0.559	0.005	0.0727	0.0006	0.26513	450.8	3.3	452.3	3.3	441.0	13.0	452.3	3.3	0.3
13GRT01_71	80.4	1.305	11.360	0.100	0.4097	0.0036	0.9582	2552.5	8.2	2213.0	17.0	2834.3	5.7	2834.3	5.7	21.9
13GRT01_72	109	0.956	4.044	0.037	0.2862	0.0024	0.61353	1642.8	7.4	1623.0	12.0	1669.6	9.2	1669.6	9.2	2.8
13GRT01_73	218	5.34	5.121	0.036	0.3400	0.0020	0.62767	1840.1	6.0	1886.5	9.8	1787.0	6.3	1787.0	6.3	5.6
13GRT01_74	118	1.422	17.070	0.220	0.5794	0.0056	0.92499	2939.0	13.0	2946.0	23.0	2928.8	5.9	2928.8	5.9	0.6
13GRT01_75	332	0.786	0.106	0.002	0.0156	0.0002	0.41986	102.3	1.7	99.6	1.0	172.0	25.0	99.6	1.0	2.6
13GRT01_76	240.2	0.999	2.410	0.024	0.2028	0.0019	0.9014	1245.4	6.9	1190.0	10.0	1342.5	6.0	1190.0	10.0	4.4
13GRT01_77	18.4	0.7356	1.891	0.023	0.1852	0.0020	0.23565	1078.4	8.1	1095.0	11.0	1044.0	14.0	1095.0	11.0	1.5
13GRT01_78	182.7	1.646	2.128	0.012	0.1997	0.0011	0.64667	1157.9	3.8	1173.6	5.7	1135.5	4.6	1173.6	5.7	1.4
13GRT01_79	270	1.019	0.099	0.001	0.0152	0.0002	0.31681	95.7	1.3	97.1	1.0	102.0	20.0	97.1	1.0	1.4
13GRT01_80	90.6	1.77	0.552	0.006	0.0722	0.0007	0.33574	446.4	4.3	449.4	3.9	444.0	15.0	449.4	3.9	0.7
13GRT01_81	288	1.963	3.576	0.021	0.2760	0.0020	0.69184	1544.1	4.7	1571.0	9.9	1506.6	7.5	1506.6	7.5	4.3
13GRT01_82	96.8	1.418	1.997	0.024	0.1892	0.0022	0.88205	1114.0	8.2	1117.0	12.0	1106.5	7.8	1117.0	12.0	0.3
13GRT01_83	127	1.704	2.050	0.019	0.1917	0.0016	0.78745	1132.0	6.3	1130.4	8.4	1138.1	8.8	1130.4	8.4	0.1
13GRT01_84	107.6	1.942	2.115	0.036	0.1846	0.0035	0.84826	1153.0	12.0	1092.0	19.0	1263.3	9.4	1092.0	19.0	5.3
13GRT01_85	51.3	1.376	1.220	0.020	0.1176	0.0016	0.64632	808.9	9.1	716.8	9.2	1069.0	14.0	716.8	9.2	11.4
13GRT01_86	119.3	3.229	1.768	0.012	0.1754	0.0011	0.28968	1034.8	4.5	1041.8	6.2	1014.4	9.6	1041.8	6.2	0.7
13GRT01_87	181.6	1.129	1.849	0.011	0.1813	0.0010	0.55226	1062.9	4.1	1073.9	5.7	1045.3	5.5	1073.9	5.7	1.0
13GRT01_88	121.7	0.776	0.342	0.004	0.0479	0.0005	0.2152	298.5	3.3	301.5	2.8	274.0	21.0	301.5	2.8	1.0
13GRT01_89	58.9	0.835	0.814	0.017	0.0911	0.0009	0.091772	605.0	9.9	562.2	5.0	756.0	39.0	562.2	5.0	7.1
13GRT01_90	36.96	1.218	4.670	0.140	0.2776	0.0038	0.35512	1769.0	27.0	1579.0	19.0	2020.0	54.0	2020.0	54.0	21.8
13GRT01_91	90.2	1.952	1.600	0.037	0.1573	0.0038	0.9394	968.0	15.0	941.0	21.0	1030.9	9.2	941.0	21.0	2.8
13GRT01_92	60.66	0.4609	0.530	0.008	0.0685	0.0006	0.17734	432.2	5.0	427.2	3.8	463.0	18.0	427.2	3.8	1.2
13GRT01_93	208	5.25	2.809	0.037	0.1986	0.0021	0.21924	1357.5	9.9	1168.0	11.0	1673.0	30.0	1168.0	11.0	14.0
13GRT01_94	66.2	1.36	1.983	0.026	0.1885	0.0017	0.60231	1109.1	9.0	1113.0	9.0	1095.0	14.0	1113.0	9.0	0.4
13GRT01_95	38.6	0.96	0.724	0.010	0.0908	0.0009	0.15578	552.6	5.6	559.9	5.5	522.0	19.0	559.9	5.5	1.3
13GRT01_96	381	1.151	0.181	0.002	0.0265	0.0002	0.51773	168.5	1.7	168.3	1.3	175.0	12.0	168.3	1.3	0.1
13GRT01_97	68.4	1.394	1.857	0.021	0.1802	0.0024	0.56523	1066.3	7.4	1068.0	13.0	1069.0	13.0	1068.0	13.0	0.2
13GRT01_98	136.3	1.431	3.265	0.038	0.2515	0.0031	0.80658	1472.5	9.0	1446.0	16.0	1494.3	7.4	1494.3	7.4	3.2
13GRT01_99	349	2.363	0.682	0.041	0.0789	0.0025	0.95672	526.0	24.0	489.0	15.0	688.0	54.0	489.0	15.0	7.0

13GRT01_100	280.3	8.41	0.482	0.004	0.0635	0.0006	0.61732	400.1	3.1	396.9	3.4	424.0	11.0	396.9	3.4	0.8
13GRT01_101	152.7	1.621	3.884	0.040	0.2713	0.0026	0.82154	1609.9	8.3	1547.0	13.0	1679.1	7.0	1679.1	7.0	7.9
13GRT01_102	83.3	1.627	1.821	0.017	0.1788	0.0012	0.51622	1052.5	6.1	1060.5	6.8	1038.1	9.1	1060.5	6.8	0.8
13GRT01_103	212.8	1.625	0.105	0.002	0.0162	0.0002	0.25756	101.4	1.6	103.6	1.1	116.0	25.0	103.6	1.1	2.2
13GRT01_104	199.8	1.181	0.106	0.002	0.0159	0.0002	0.12792	102.4	1.8	102.0	1.0	168.0	30.0	102.0	1.0	0.4
13GRT01_105	77.1	1.918	3.052	0.028	0.2459	0.0024	0.75047	1420.4	7.1	1417.0	12.0	1423.3	9.1	1423.3	9.1	0.4
13GRT01_106	384	2.99	0.224	0.003	0.0323	0.0003	0.043086	205.3	2.1	205.1	1.7	210.0	15.0	205.1	1.7	0.1
13GRT01_107	354	1.583	0.103	0.002	0.0157	0.0002	0.4103	99.6	1.7	100.5	1.3	112.0	20.0	100.5	1.3	0.9
13GRT01_108	490	1.6	0.096	0.002	0.0140	0.0003	0.708	92.7	1.9	89.3	1.7	176.0	17.0	89.3	1.7	3.7
13GRT01_109	154.9	1.747	4.083	0.026	0.2916	0.0027	0.20351	1651.4	5.0	1649.0	13.0	1647.2	8.2	1647.2	8.2	0.1
13GRT01_110	123.6	2.362	1.786	0.012	0.1767	0.0012	0.39863	1041.0	4.6	1048.6	6.6	1027.4	8.7	1048.6	6.6	0.7
13GRT01_111	159	1.246	0.820	0.010	0.0980	0.0009	0.34915	607.9	5.3	602.5	5.4	616.0	15.0	602.5	5.4	0.9
13GRT01_112	20.5	1.89	13.000	0.130	0.5093	0.0057	0.64514	2678.5	9.7	2653.0	24.0	2685.0	13.0	2685.0	13.0	1.2
13GRT01_113	164.9	1.269	4.645	0.039	0.3152	0.0027	0.84351	1757.0	6.9	1766.0	13.0	1745.5	5.5	1745.5	5.5	1.2
13GRT01_114	382	1.45	4.294	0.030	0.3045	0.0024	0.83178	1691.9	5.8	1714.0	12.0	1665.5	5.3	1665.5	5.3	2.9
13GRT01_115	215.6	1.493	5.577	0.051	0.3424	0.0030	0.94649	1912.0	8.1	1898.0	15.0	1927.1	5.5	1927.1	5.5	1.5
13GRT01_116	159.8	1.553	2.877	0.014	0.2366	0.0015	0.71569	1375.9	3.8	1369.0	7.9	1388.4	5.5	1388.4	5.5	1.4
13GRT01_117	59.2	1.049	2.558	0.022	0.2214	0.0021	0.55822	1289.3	6.4	1289.0	11.0	1298.0	10.0	1298.0	10.0	0.7
13GRT01_118	381	1.08	0.093	0.002	0.0139	0.0001	0.36277	89.8	1.8	88.8	0.9	137.0	27.0	88.8	0.9	1.2
13GRT01_119	70.5	1.263	1.888	0.026	0.1827	0.0019	0.72575	1077.2	9.0	1081.0	10.0	1063.0	13.0	1081.0	10.0	0.4
13GRT01_120	163	1.911	4.997	0.044	0.3331	0.0029	0.72633	1819.3	7.3	1855.0	14.0	1778.4	7.7	1778.4	7.7	4.3
13GRT02_1	270	0.905	0.105	0.002	0.0158	0.0001	0.76697	101.6	1.7	101.1	0.9	144.0	22.0	101.1	0.9	0.5
13GRT02_2	60.8	1.84	3.902	0.053	0.2833	0.0036	0.85292	1613.0	11.0	1608.0	18.0	1611.0	7.8	1611.0	7.8	0.2
13GRT02_3	77.1	1.159	5.259	0.034	0.3405	0.0025	0.83254	1862.6	5.5	1889.0	12.0	1827.7	6.1	1827.7	6.1	3.4
13GRT02_4	53.1	0.505	4.863	0.063	0.3160	0.0052	0.97454	1795.0	11.0	1773.0	25.0	1827.0	12.0	1827.0	12.0	3.0
13GRT02_5	61.7	1.376	1.195	0.016	0.1309	0.0017	0.8634	797.8	7.6	792.9	9.4	801.0	13.0	792.9	9.4	0.6
13GRT02_6	77.4	0.379	1.886	0.026	0.1845	0.0021	0.85547	1075.4	9.0	1091.0	12.0	1017.0	11.0	1091.0	12.0	1.5
13GRT02_7	149.1	1.524	3.414	0.024	0.2706	0.0020	0.82253	1507.3	5.6	1543.9	9.9	1455.6	7.6	1455.6	7.6	6.1
13GRT02_9	37.7	1.053	1.993	0.026	0.1924	0.0017	0.74536	1114.8	9.3	1134.3	9.4	1063.0	17.0	1134.3	9.4	1.7
13GRT02_11	42.5	0.834	5.450	0.130	0.3437	0.0059	0.7941	1892.0	21.0	1904.0	28.0	1877.0	18.0	1877.0	18.0	1.4
13GRT02_12	97.6	0.6092	4.774	0.038	0.3216	0.0025	0.79076	1780.1	6.7	1797.0	12.0	1763.4	6.3	1763.4	6.3	1.9
13GRT02_13	165	1.544	1.965	0.021	0.1897	0.0019	0.84857	1103.1	7.0	1120.0	10.0	1055.0	12.0	1120.0	10.0	1.5
13GRT02_14	184	0.64	0.758	0.010	0.0942	0.0009	0.78621	572.4	5.8	580.2	5.3	540.0	15.0	580.2	5.3	1.4

13GRT02_15	36.1	0.72	1.684	0.020	0.1699	0.0019	0.76187	1002.0	7.4	1011.0	11.0	978.0	19.0	1011.0	11.0	0.9
13GRT02_16	70.1	1.26	5.918	0.047	0.3636	0.0032	0.9132	1963.5	7.0	1999.0	15.0	1918.8	9.2	1918.8	9.2	4.2
13GRT02_17	45.35	0.895	12.200	0.110	0.5227	0.0041	0.95455	2620.8	8.1	2710.0	18.0	2552.4	5.7	2552.4	5.7	6.2
13GRT02_18	315.2	1.854	10.990	0.130	0.4823	0.0056	0.85008	2522.0	11.0	2537.0	24.0	2509.9	9.2	2509.9	9.2	1.1
13GRT02_19	403	6.852	2.544	0.021	0.2244	0.0019	0.81319	1284.3	5.9	1305.0	10.0	1252.1	7.5	1252.1	7.5	4.2
13GRT02_20	29.8	0.848	2.216	0.026	0.2059	0.0026	0.90061	1185.5	8.1	1208.0	13.0	1138.0	18.0	1138.0	13.0	1.9
13GRT02_21	72.9	2.2	2.039	0.035	0.1945	0.0028	0.80034	1132.0	12.0	1146.0	15.0	1102.0	16.0	1146.0	15.0	1.2
13GRT02_22	239.4	0.789	1.921	0.015	0.1852	0.0014	0.67807	1088.7	5.2	1095.1	7.8	1067.2	7.0	1095.1	7.8	0.6
13GRT02_23	370	2.64	0.892	0.008	0.1058	0.0010	0.80594	647.0	4.3	648.2	6.1	645.0	11.0	648.2	6.1	0.2
13GRT02_24	42.9	0.939	5.785	0.067	0.3598	0.0040	0.94664	1943.0	10.0	1981.0	19.0	1891.9	8.6	1891.9	8.6	4.7
13GRT02_25	78.8	1.757	6.569	0.058	0.3777	0.0040	0.92314	2055.7	7.6	2065.0	19.0	2042.1	8.9	2042.1	8.9	1.1
13GRT02_26	187.6	0.808	14.071	0.096	0.5413	0.0045	0.88621	2754.2	6.4	2789.0	19.0	2731.3	7.0	2731.3	7.0	2.1
13GRT02_27	175.9	1.902	0.098	0.002	0.0152	0.0002	0.72862	95.2	1.8	97.5	1.1	111.0	24.0	97.5	1.1	2.4
13GRT02_28	102.2	1.095	1.763	0.076	0.1493	0.0024	0.97517	1033.0	28.0	897.0	13.0	1347.0	77.0	897.0	13.0	13.2
13GRT02_29	44	0.688	5.601	0.058	0.3471	0.0029	0.87449	1915.6	8.9	1921.0	14.0	1907.0	11.0	1907.0	11.0	0.7
13GRT02_30	44.1	1.045	4.411	0.044	0.3088	0.0030	0.92679	1713.9	8.2	1735.0	15.0	1679.0	9.1	1679.0	9.1	3.3
13GRT02_31	369	2.131	0.520	0.007	0.0671	0.0010	0.87408	424.7	4.5	418.7	5.9	465.0	15.0	418.7	5.9	1.4
13GRT02_32	151	1.395	2.086	0.020	0.1975	0.0017	0.84022	1144.8	6.5	1163.3	9.4	1100.4	9.1	1163.3	9.4	1.6
13GRT02_33	34.4	0.782	0.870	0.017	0.1021	0.0015	0.86399	635.7	9.3	626.4	9.0	656.0	25.0	626.4	9.0	1.5
13GRT02_34	52.6	0.793	5.466	0.052	0.3539	0.0038	0.91683	1896.8	8.5	1952.0	18.0	1835.0	10.0	1835.0	10.0	6.4
13GRT02_35	83.6	1.373	4.096	0.039	0.2911	0.0025	0.80682	1653.0	7.9	1647.0	13.0	1643.0	11.0	1643.0	11.0	0.2
13GRT02_36	127.2	1.04	1.873	0.019	0.1809	0.0017	0.83514	1071.3	6.6	1071.9	9.4	1067.6	8.7	1071.9	9.4	0.1
13GRT02_37	129	1.904	1.808	0.018	0.1779	0.0016	0.74632	1049.0	6.2	1055.6	8.8	1027.4	9.0	1055.6	8.8	0.6
13GRT02_38	65.2	1.333	1.876	0.020	0.1816	0.0018	0.81417	1072.2	7.0	1075.5	9.7	1065.0	13.0	1075.5	9.7	0.3
13GRT02_39	175.2	1.947	2.090	0.014	0.1978	0.0015	0.59263	1146.1	4.4	1163.3	7.8	1115.6	8.1	1163.3	7.8	1.5
13GRT02_40	21.61	2.568	5.172	0.053	0.3289	0.0029	0.85943	1848.4	8.5	1833.0	14.0	1875.0	13.0	1875.0	13.0	2.2
13GRT02_41	69.2	0.5827	10.153	0.066	0.4741	0.0034	0.91934	2448.5	6.0	2501.0	15.0	2409.5	5.9	2409.5	5.9	3.8
13GRT02_42	106.5	1.195	6.045	0.055	0.3726	0.0035	0.9685	1981.8	7.9	2041.0	17.0	1918.4	8.2	1918.4	8.2	6.4
13GRT02_43	65.7	0.747	2.070	0.045	0.1919	0.0055	0.97831	1141.0	14.0	1131.0	30.0	1130.0	20.0	1131.0	30.0	0.9
13GRT02_44	62.4	0.685	2.847	0.083	0.1719	0.0026	0.99767	1366.0	22.0	1023.0	14.0	1927.0	69.0	1023.0	14.0	25.1
13GRT02_45	370	1.58	1.849	0.014	0.1818	0.0015	0.73369	1062.7	5.2	1076.6	8.3	1040.0	8.9	1076.6	8.3	1.3
13GRT02_46	36	0.523	1.826	0.025	0.1760	0.0017	0.72373	1054.1	9.1	1044.7	9.4	1077.0	17.0	1044.7	9.4	0.9
13GRT02_47	205.8	1.629	1.907	0.017	0.1845	0.0016	0.70926	1083.2	5.9	1091.2	8.7	1087.2	9.6	1091.2	8.7	0.7
13GRT02_48	48.1	0.771	5.253	0.052	0.3411	0.0036	0.89507	1860.6	8.4	1892.0	17.0	1832.0	11.0	1832.0	11.0	3.3
13GRT02_49	111.1	1.099	2.029	0.015	0.1960	0.0015	0.82864	1125.2	5.2	1153.7	8.2	1073.6	8.6	1153.7	8.2	2.5

13GRT02_50	82.1	0.7628	4.549	0.032	0.3159	0.0023	0.79821	1739.8	5.9	1770.0	11.0	1707.7	6.1	1707.7	6.1	3.6
13GRT02_51	10.51	0.898	0.738	0.026	0.0916	0.0021	0.96753	563.0	15.0	565.0	13.0	534.0	53.0	565.0	13.0	0.4
13GRT02_52	278	1.071	0.550	0.150	0.0205	0.0013	0.87139	374.0	84.0	130.7	8.4	1940.0	370.0	DISC	DISC	65.1
13GRT02_53	134.2	2.13	5.376	0.044	0.3464	0.0030	0.90565	1881.5	7.2	1919.0	14.0	1841.0	10.0	1841.0	10.0	4.2
13GRT02_54	161	1.237	4.803	0.045	0.3211	0.0028	0.81835	1785.9	7.7	1795.0	13.0	1774.1	8.1	1774.1	8.1	1.2
13GRT02_55	24.32	1.08	2.644	0.043	0.2254	0.0031	0.89052	1314.0	12.0	1310.0	16.0	1330.0	13.0	1330.0	13.0	1.5
13GRT02_56	52.2	0.6806	2.555	0.025	0.2211	0.0021	0.79825	1288.5	7.4	1287.0	11.0	1294.0	11.0	1294.0	11.0	0.5
13GRT02_57	460	2.045	0.106	0.002	0.0163	0.0002	0.67735	102.2	1.5	104.0	1.2	138.0	26.0	104.0	1.2	1.8
13GRT02_58	134.9	1.944	4.161	0.035	0.2989	0.0025	0.8257	1666.8	6.9	1686.0	12.0	1643.4	7.2	1643.4	7.2	2.6
13GRT02_59	62.6	0.693	3.123	0.034	0.2511	0.0034	0.98507	1437.7	8.4	1444.0	18.0	1426.0	14.0	1426.0	14.0	1.3
13GRT02_60	90.3	0.376	4.338	0.035	0.3037	0.0026	0.77269	1700.1	6.6	1709.0	13.0	1689.4	5.7	1689.4	5.7	1.2
13GRT02_61	118	1.2	3.234	0.044	0.2501	0.0031	0.93515	1467.0	10.0	1439.0	16.0	1507.4	9.6	1507.4	9.6	4.5
13GRT02_62	98.9	0.8305	4.997	0.030	0.3270	0.0021	0.65065	1818.5	5.1	1824.0	10.0	1818.3	7.3	1818.3	7.3	0.3
13GRT02_63	42.6	0.928	1.879	0.028	0.1831	0.0019	0.82168	1073.0	10.0	1084.0	11.0	1064.0	19.0	1084.0	11.0	1.0
13GRT02_64	47.2	1.051	1.770	0.019	0.1789	0.0016	0.78327	1034.3	7.0	1060.7	8.8	1000.0	14.0	1060.7	8.8	2.6
13GRT02_65	274	1.585	1.930	0.012	0.1864	0.0012	0.61967	1091.4	4.2	1101.6	6.6	1072.1	7.8	1101.6	6.6	0.9
13GRT02_66	39.2	1.33	2.704	0.037	0.2310	0.0021	0.90677	1330.2	9.6	1340.0	11.0	1301.0	14.0	1301.0	14.0	3.0
13GRT02_67	32.6	2.007	15.280	0.110	0.5651	0.0054	0.97266	2833.7	6.8	2887.0	22.0	2804.9	7.3	2804.9	7.3	2.9
13GRT02_68	19.92	0.78	0.581	0.016	0.0727	0.0016	0.96617	466.0	10.0	452.2	9.8	530.0	31.0	452.2	9.8	3.0
13GRT02_69	106	1.006	1.998	0.017	0.1913	0.0016	0.7478	1114.7	5.7	1128.2	8.7	1100.0	10.0	1128.2	8.7	1.2
13GRT02_70	87.1	2.42	0.622	0.012	0.0813	0.0010	0.78232	490.5	7.2	504.0	6.1	442.0	23.0	504.0	6.1	2.8
13GRT02_71	181	1.105	3.520	0.027	0.2735	0.0023	0.84054	1531.5	6.0	1558.0	12.0	1491.0	9.8	1491.0	9.8	4.5
13GRT02_72	20.79	0.5906	20.560	0.200	0.6147	0.0076	0.96964	3117.4	9.3	3088.0	30.0	3147.1	8.8	3147.1	8.8	1.9
13GRT02_73	130.2	0.621	5.287	0.034	0.3399	0.0019	0.78909	1866.4	5.5	1886.2	9.0	1850.0	6.0	1850.0	6.0	2.0
13GRT02_74	77.3	1.357	5.457	0.047	0.3435	0.0023	0.76262	1893.4	7.5	1905.0	11.0	1887.5	8.2	1887.5	8.2	0.9
13GRT02_75	46.2	0.81	2.285	0.032	0.2020	0.0028	0.91399	1207.0	10.0	1186.0	15.0	1240.0	16.0	1186.0	15.0	1.7
13GRT02_76	190	1.109	3.226	0.025	0.2567	0.0023	0.83312	1463.1	6.0	1473.0	12.0	1451.8	7.0	1451.8	7.0	1.5
13GRT02_77	101.6	1.047	4.978	0.032	0.3283	0.0023	0.77069	1816.1	5.5	1830.0	11.0	1797.1	8.3	1797.1	8.3	1.8
13GRT02_78	42.83	0.4426	5.972	0.077	0.3643	0.0049	0.96597	1971.0	11.0	2002.0	23.0	1934.9	8.8	1934.9	8.8	3.5
13GRT02_79	21.4	1.02	1.956	0.040	0.1876	0.0030	0.97376	1101.0	14.0	1108.0	16.0	1093.0	18.0	1108.0	16.0	0.6
13GRT02_80	53.7	1.068	3.999	0.034	0.2889	0.0021	0.7952	1633.5	7.0	1636.0	11.0	1640.9	8.7	1640.9	8.7	0.3
13GRT02_81	198.5	1.751	1.888	0.014	0.1876	0.0013	0.75261	1076.5	5.1	1108.4	7.0	1018.0	10.0	1108.4	7.0	3.0
13GRT02_82	256	7.45	4.886	0.036	0.3218	0.0033	0.9101	1800.5	6.5	1798.0	16.0	1807.0	7.1	1807.0	7.1	0.5
13GRT02_83	341	1.677	1.843	0.013	0.1814	0.0016	0.78113	1060.8	4.6	1074.3	8.6	1039.4	6.1	1074.3	8.6	1.3
13GRT02_84	49	1.141	2.813	0.031	0.2272	0.0022	0.89135	1358.3	8.4	1320.0	11.0	1412.0	12.0	1412.0	12.0	6.5

13GRT02_85	225.8	1.047	0.563	0.009	0.0721	0.0006	0.77324	453.4	5.5	448.6	3.3	478.0	28.0	448.6	3.3	1.1
13GRT02_86	69.8	0.5977	1.059	0.013	0.1211	0.0011	0.63142	733.1	6.3	736.9	6.1	743.0	16.0	736.9	6.1	0.5
13GRT02_87	69.1	1.473	1.740	0.025	0.1721	0.0024	0.86907	1024.2	9.5	1023.0	13.0	1035.0	10.0	1023.0	13.0	0.1
13GRT02_88	160	1.161	2.050	0.018	0.1939	0.0018	0.85601	1132.9	5.9	1142.0	10.0	1116.0	8.1	1142.0	10.0	0.8
13GRT02_89	308	2.97	1.867	0.010	0.1826	0.0008	0.5601	1070.1	3.4	1081.3	4.3	1049.8	6.9	1081.3	4.3	1.0
13GRT02_90	8.78	0.939	1.969	0.059	0.1823	0.0034	0.95736	1102.0	20.0	1079.0	18.0	1124.0	31.0	1079.0	18.0	2.1
13GRT02_92	377	2.81	4.530	0.027	0.3001	0.0018	0.7937	1736.2	4.9	1691.5	9.0	1790.4	5.6	1790.4	5.6	5.5
13GRT02_93	277	0.8723	3.833	0.037	0.2770	0.0029	0.87014	1599.2	7.8	1576.0	15.0	1634.1	6.6	1634.1	6.6	3.6
13GRT02_94	49.1	1.637	1.731	0.020	0.1708	0.0017	0.83074	1019.5	7.3	1016.5	9.3	1019.0	13.0	1016.5	9.3	0.3
13GRT02_95	159	0.63	0.827	0.009	0.0988	0.0008	0.81191	611.5	5.1	607.3	4.6	634.0	16.0	607.3	4.6	0.7
13GRT02_96	24.5	1.081	4.425	0.050	0.3093	0.0027	0.82839	1716.3	9.4	1737.0	13.0	1701.0	13.0	1701.0	13.0	2.1
13GRT02_98	39.6	1.227	5.737	0.057	0.3525	0.0036	0.87491	1937.4	8.4	1946.0	17.0	1926.0	12.0	1926.0	12.0	1.0
13GRT02_99	66	1.247	2.095	0.021	0.1959	0.0018	0.85557	1146.8	6.9	1154.8	9.7	1135.0	11.0	1154.8	9.7	0.7
13GRT02_100	77.5	1.319	5.502	0.048	0.3418	0.0037	0.92613	1900.5	7.5	1897.0	18.0	1917.0	11.0	1917.0	11.0	1.0
13GRT02_101	219	0.75	0.585	0.007	0.0746	0.0009	0.79678	467.4	4.3	463.8	5.1	496.0	18.0	463.8	5.1	0.8
13GRT02_102	310	0.9604	0.096	0.002	0.0143	0.0001	0.67811	92.8	1.7	91.3	0.9	153.0	24.0	91.3	0.9	1.6
13GRT02_103	97.8	0.749	2.276	0.020	0.2079	0.0017	0.68318	1204.6	6.1	1217.7	8.9	1182.2	8.5	1182.2	8.9	1.1
13GRT02_104	41.2	1.478	2.781	0.032	0.2333	0.0022	0.86946	1349.7	8.6	1352.0	12.0	1360.0	15.0	1360.0	15.0	0.6
13GRT02_105	69.02	0.855	1.984	0.020	0.1876	0.0015	0.72298	1109.6	6.7	1108.1	8.2	1125.0	11.0	1108.1	8.2	0.1
13GRT02_106	156.1	1.955	1.780	0.012	0.1745	0.0013	0.70459	1037.8	4.4	1036.9	7.1	1044.9	7.4	1036.9	7.1	0.1
13GRT02_107	151.6	1.715	0.567	0.007	0.0719	0.0008	0.70943	455.7	4.6	447.7	4.9	512.0	14.0	447.7	4.9	1.8
13GRT02_108	102.2	28.5	0.530	0.011	0.0675	0.0013	0.57991	431.3	7.2	420.9	7.7	466.0	27.0	420.9	7.7	2.4
13GRT02_108	238.1	1.018	1.760	0.022	0.1694	0.0012	0.67644	1030.8	8.1	1008.8	6.8	1073.0	15.0	1008.8	6.8	2.1
13GRT02_110	149	1.114	1.992	0.023	0.1910	0.0017	0.80033	1113.5	7.7	1126.6	9.4	1090.0	14.0	1126.6	9.4	1.2
13GRT03_1	54.1	1.367	0.080	0.003	0.0124	0.0002	0.012802	78.4	3.0	79.5	1.2	244.0	45.0	79.5	1.2	1.4
13GRT03_2	106.8	0.7631	0.433	0.005	0.0584	0.0006	0.21632	365.8	3.7	365.9	3.7	366.0	19.0	365.9	3.7	0.0
13GRT03_3	155.3	1.165	3.064	0.022	0.2515	0.0018	0.66787	1423.4	5.6	1446.1	9.3	1390.5	6.3	1390.5	6.3	4.0
13GRT03_4	71.5	0.8628	4.105	0.027	0.2957	0.0019	0.32472	1655.0	5.4	1669.8	9.4	1635.1	8.2	1635.1	8.2	2.1
13GRT03_5	56.6	1.71	0.797	0.017	0.0927	0.0018	0.77601	594.2	9.6	571.0	11.0	673.0	14.0	571.0	11.0	3.9
13GRT03_6	501	13.3	0.405	0.012	0.0538	0.0011	0.94494	344.7	8.7	337.6	6.4	388.0	25.0	337.6	6.4	2.1
13GRT03_7	211	0.997	0.106	0.002	0.0158	0.0002	0.0088434	102.6	2.1	101.2	1.2	161.0	26.0	101.2	1.2	1.4
13GRT03_8	330	1.91	4.953	0.043	0.3297	0.0034	0.90594	1810.9	7.3	1837.0	16.0	1788.3	5.1	1788.3	5.1	2.7
13GRT03_9	102.2	1.293	0.450	0.006	0.0607	0.0006	0.3483	377.3	4.0	379.8	3.7	387.0	13.0	379.8	3.7	0.7

13GRT03_10	383	1.459	0.857	0.012	0.1029	0.0015	0.94646	628.1	6.7	631.5	8.7	620.2	9.2	631.5	8.7	0.5
13GRT03_11	67	0.902	3.421	0.031	0.2670	0.0024	0.65803	1508.9	7.2	1525.0	12.0	1488.2	8.2	1488.2	8.2	2.5
13GRT03_12	800	2.16	0.103	0.002	0.0151	0.0003	0.52957	99.2	1.7	96.7	1.6	262.0	42.0	96.7	1.6	2.5
13GRT03_13	53.1	0.891	1.615	0.024	0.1568	0.0021	0.72646	975.2	9.1	939.0	12.0	1073.0	13.0	939.0	12.0	3.7
13GRT03_14	133	1.506	3.209	0.023	0.2579	0.0018	0.44996	1459.8	5.8	1479.0	9.5	1432.1	8.5	1432.1	8.5	3.3
13GRT03_15	100.6	2.606	4.698	0.045	0.3196	0.0026	0.82906	1767.4	8.3	1788.0	13.0	1741.5	8.3	1741.5	8.3	2.7
13GRT03_16	87.1	0.88	1.697	0.015	0.1702	0.0013	0.40186	1006.9	5.5	1012.9	6.9	1000.0	11.0	1012.9	6.9	0.6
13GRT03_17	462	7.263	2.477	0.018	0.2177	0.0014	0.65273	1265.6	5.1	1269.8	7.6	1256.6	6.3	1256.6	6.3	1.1
13GRT03_18	48.4	1.297	1.247	0.027	0.1325	0.0026	0.81838	821.0	12.0	802.0	15.0	876.0	19.0	802.0	15.0	2.3
13GRT03_18	23.82	1.296	1.653	0.056	0.1725	0.0045	0.6978	995.0	20.0	1026.0	25.0	930.0	34.0	1026.0	25.0	3.1
13GRT03_19	92.5	0.7834	3.240	0.020	0.2599	0.0019	0.59441	1466.7	4.9	1489.0	9.8	1440.6	6.7	1440.6	6.7	3.4
13GRT03_20	220.2	2.941	5.019	0.023	0.3364	0.0017	0.67608	1822.4	3.9	1870.3	8.3	1772.7	4.3	1772.7	4.3	5.5
13GRT03_21	182	2.219	4.384	0.032	0.3001	0.0021	0.85538	1709.8	6.2	1693.0	11.0	1735.7	5.3	1735.7	5.3	2.5
13GRT03_22	109.9	1.536	1.840	0.011	0.1821	0.0010	0.29338	1059.7	3.9	1078.2	5.7	1027.6	8.4	1078.2	5.7	1.7
13GRT03_23	112	1.991	0.106	0.003	0.0159	0.0002	0.10124	102.6	2.3	101.7	1.2	187.0	37.0	101.7	1.2	0.9
13GRT03_24	673	65.5	3.049	0.067	0.2073	0.0040	0.9679	1418.0	17.0	1214.0	21.0	1747.4	7.3	DISC	DISC	30.5
13GRT03_25	62.4	0.4455	13.668	0.077	0.5293	0.0034	0.58486	2726.8	5.3	2738.0	14.0	2731.9	5.8	2731.9	5.8	0.2
13GRT03_26	11.13	0.694	1.775	0.037	0.1692	0.0021	0.36627	1035.0	13.0	1007.0	12.0	1103.0	22.0	1007.0	12.0	2.7
13GRT03_27	553	5.18	1.394	0.019	0.1442	0.0018	0.78423	887.9	7.6	868.0	10.0	948.2	9.7	868.0	10.0	2.2
13GRT03_28	407	2.89	3.168	0.047	0.2543	0.0039	0.89204	1449.0	11.0	1460.0	20.0	1440.2	7.9	1440.2	7.9	1.4
13GRT03_29	110.4	1.85	4.485	0.034	0.3114	0.0025	0.71219	1728.7	6.1	1747.0	12.0	1714.3	7.3	1714.3	7.3	1.9
13GRT03_30	191.7	1.462	0.112	0.004	0.0159	0.0002	0.38358	107.6	3.2	101.4	1.1	296.0	59.0	101.4	1.1	5.8
13GRT03_31	127	1.431	3.216	0.033	0.2615	0.0029	0.81277	1461.4	7.9	1497.0	15.0	1410.9	6.6	1410.9	6.6	6.1
13GRT03_32	489	1.702	0.320	0.002	0.0445	0.0003	0.4527	281.8	1.8	280.4	1.8	307.0	11.0	280.4	1.8	0.5
13GRT03_33	213	0.94	2.013	0.015	0.1911	0.0015	0.71125	1119.7	5.2	1127.5	7.9	1108.7	7.3	1127.5	7.9	0.7
13GRT03_34	71.3	1.795	1.581	0.017	0.1617	0.0013	0.39295	962.3	6.9	966.3	7.1	961.0	11.0	966.3	7.1	0.4
13GRT03_35	12.94	0.79	1.757	0.036	0.1736	0.0026	0.26653	1028.0	13.0	1031.0	14.0	1023.0	28.0	1031.0	14.0	0.3
13GRT03_36	90.1	2.376	0.567	0.008	0.0733	0.0008	0.24953	455.6	4.9	456.2	4.6	461.0	20.0	456.2	4.6	0.1
13GRT03_37	89.9	1.707	1.535	0.016	0.1569	0.0013	0.5698	944.4	6.5	939.6	7.4	961.0	11.0	939.6	7.4	0.5
13GRT03_38	175	2.15	4.456	0.054	0.2964	0.0038	0.91896	1723.0	10.0	1673.0	19.0	1787.5	5.8	1787.5	5.8	6.4
13GRT03_39	387	4.11	2.920	0.021	0.2397	0.0021	0.83046	1386.9	5.3	1385.0	11.0	1396.0	5.8	1396.0	5.8	0.8
13GRT03_40	90.2	0.4531	4.013	0.032	0.2893	0.0020	0.75873	1636.4	6.5	1638.0	10.0	1638.3	7.3	1638.3	7.3	0.0
13GRT03_41	231.3	2.289	2.920	0.016	0.2328	0.0014	0.57116	1386.8	4.2	1349.1	7.1	1438.9	5.4	1438.9	5.4	6.2
13GRT03_42	153.6	1.045	0.113	0.003	0.0170	0.0002	0.0069823	108.2	2.5	108.7	1.2	201.0	40.0	108.7	1.2	0.5
13GRT03_43	311	1.102	0.133	0.007	0.0157	0.0003	0.55079	126.7	6.2	100.2	1.6	629.0	89.0	100.2	1.6	20.9

13GRT03_44	51.1	1.04	1.171	0.011	0.1297	0.0012	0.10811	786.6	5.3	786.0	6.7	798.0	13.0	786.0	6.7	0.1
13GRT03_45	188	0.965	0.185	0.003	0.0272	0.0003	0.30341	172.4	2.5	172.7	1.7	172.0	20.0	172.7	1.7	0.2
13GRT03_46	112.4	1.094	2.740	0.022	0.2336	0.0015	0.93282	1339.0	6.0	1353.0	8.1	1313.9	7.2	1313.9	7.2	3.0
13GRT03_47	23.7	1.783	15.470	0.110	0.5577	0.0046	0.72706	2844.9	7.2	2857.0	19.0	2834.9	7.7	2834.9	7.7	0.8
13GRT03_48	81.8	1.869	2.609	0.020	0.2285	0.0014	0.50941	1303.7	5.5	1326.3	7.6	1262.0	8.5	1262.0	8.5	5.1
13GRT03_49	287.7	1.874	1.990	0.011	0.1890	0.0011	0.66177	1112.1	3.7	1116.7	5.9	1100.9	5.4	1116.7	5.9	0.4
13GRT03_50	198.6	2.386	3.146	0.024	0.2515	0.0017	0.69704	1443.8	5.9	1446.3	8.8	1444.5	7.8	1444.5	7.8	0.1
13GRT03_51	213	1.631	0.100	0.002	0.0154	0.0001	0.056378	96.3	1.9	98.7	0.9	130.0	21.0	98.7	0.9	2.5
13GRT03_52	96.2	1.961	1.699	0.016	0.1671	0.0012	0.46397	1007.7	6.2	996.2	6.9	1029.0	11.0	996.2	6.9	1.1
13GRT03_53	166	1.605	1.956	0.013	0.1857	0.0011	0.37443	1100.4	4.6	1098.2	6.1	1106.5	8.9	1098.2	6.1	0.2
13GRT03_54	127.5	1.834	1.811	0.016	0.1760	0.0013	0.73339	1049.2	5.6	1045.2	7.2	1068.1	9.3	1045.2	7.2	0.4
13GRT03_55	229	3.77	0.483	0.005	0.0638	0.0005	0.48125	400.4	3.5	398.7	3.1	398.0	13.0	398.7	3.1	0.4
13GRT03_56	454	1.214	0.112	0.004	0.0149	0.0002	0.21969	107.6	3.8	95.6	1.1	359.0	67.0	95.6	1.1	11.2
13GRT03_57	39.4	0.895	1.129	0.013	0.1263	0.0010	0.11526	767.6	5.9	766.6	6.0	760.0	19.0	766.6	6.0	0.1
13GRT03_58	37.1	2.334	4.975	0.063	0.3037	0.0036	0.80615	1814.0	11.0	1709.0	18.0	1934.0	7.5	1934.0	7.5	11.6
13GRT03_59	43.6	1.596	13.292	0.090	0.5296	0.0043	0.69249	2700.2	6.4	2739.0	18.0	2667.3	6.1	2667.3	6.1	2.7
13GRT03_60	117	1.32	1.962	0.014	0.1901	0.0015	0.48292	1103.2	4.8	1121.9	7.9	1065.3	8.3	1121.9	7.9	1.7
13GRT03_61	183.3	13.28	0.769	0.016	0.0895	0.0013	0.84767	578.4	9.0	552.3	7.7	668.0	17.0	552.3	7.7	4.5
13GRT03_62	516	28	1.781	0.053	0.1744	0.0040	0.93812	1038.0	19.0	1036.0	22.0	1051.0	20.0	1036.0	22.0	0.2
13GRT03_62	145	4.72	2.131	0.024	0.2015	0.0021	0.69034	1158.6	7.7	1183.0	11.0	1118.0	12.0	1183.0	11.0	2.1
13GRT03_63	160.4	1.078	1.680	0.041	0.1676	0.0033	0.94285	1001.0	15.0	998.0	18.0	1005.0	12.0	998.0	18.0	0.3
13GRT03_64	28.62	1.593	3.151	0.034	0.2499	0.0028	0.44099	1444.8	8.2	1438.0	14.0	1454.0	10.0	1454.0	10.0	1.1
13GRT03_65	73.2	1.088	0.827	0.010	0.1018	0.0009	0.40776	611.5	5.4	624.6	5.0	575.0	14.0	624.6	5.0	2.1
13GRT03_66	108.4	3.67	0.582	0.018	0.0719	0.0016	0.52399	464.0	11.0	447.3	9.8	504.0	22.0	447.3	9.8	3.6
13GRT03_67	435	162.4	0.757	0.005	0.0931	0.0006	0.68352	572.4	2.6	574.0	3.5	571.6	5.4	574.0	3.5	0.3
13GRT03_68	130.1	1.808	2.246	0.016	0.2068	0.0013	0.57747	1195.3	5.0	1211.5	6.7	1177.5	8.7	1177.5	6.7	1.4
13GRT03_69	415	13.9	0.479	0.012	0.0629	0.0015	0.976	397.0	8.3	393.0	9.4	435.0	13.0	393.0	9.4	1.0
13GRT03_70	86.2	1.62	5.234	0.038	0.3374	0.0028	0.73819	1857.9	6.1	1874.0	13.0	1841.7	5.7	1841.7	5.7	1.8
13GRT03_71	314.4	4.16	2.331	0.013	0.2121	0.0011	0.70611	1221.6	4.1	1239.8	6.0	1188.2	5.3	1188.2	6.0	1.5
13GRT03_72	39.3	1.1727	0.829	0.014	0.0985	0.0010	0.30202	613.8	7.6	606.1	6.1	637.0	15.0	606.1	6.1	1.3
13GRT03_73	381	1.114	2.222	0.014	0.2050	0.0017	0.77112	1187.9	4.5	1201.9	9.0	1158.6	6.2	1158.6	9.0	1.2
13GRT03_74	142	3.037	5.589	0.041	0.3532	0.0025	0.69605	1914.0	6.4	1950.0	12.0	1874.8	5.8	1874.8	5.8	4.0
13GRT03_75	769	17.7	3.590	0.150	0.2164	0.0062	0.9835	1543.0	35.0	1262.0	33.0	1952.0	29.0	DISC	DISC	35.3
13GRT03_75	95.4	1.57	7.100	0.200	0.3329	0.0060	0.92933	2129.0	22.0	1852.0	29.0	2381.0	15.0	2381.0	15.0	22.2
13GRT03_76	166	1.62	5.410	0.093	0.3401	0.0036	0.55908	1879.7	9.4	1887.0	17.0	1879.0	15.0	1879.0	15.0	0.4

13GRT03_77	19.99	0.5385	12.920	0.120	0.5029	0.0060	0.51693	2675.0	8.8	2625.0	26.0	2716.0	10.0	2716.0	10.0	3.4
13GRT03_78	58.9	1.518	1.912	0.020	0.1823	0.0018	0.45046	1088.0	6.2	1079.3	9.6	1101.0	12.0	1079.3	9.6	0.8
13GRT03_79	114.2	2.389	1.732	0.015	0.1723	0.0011	0.35779	1020.2	5.6	1024.9	6.2	1008.0	10.0	1024.9	6.2	0.5
13GRT03_80	108	0.957	3.090	0.055	0.2456	0.0048	0.96774	1423.0	17.0	1415.0	25.0	1431.0	10.0	1431.0	10.0	1.1
13GRT03_81	298	2.41	1.630	0.120	0.1443	0.0074	0.99283	961.0	45.0	866.0	42.0	1192.0	43.0	866.0	42.0	9.9
13GRT03_82	32.8	2.98	1.866	0.024	0.1736	0.0022	0.50075	1070.8	8.8	1032.0	12.0	1169.0	18.0	1032.0	12.0	3.6
13GRT03_83	453	2.82	0.106	0.005	0.0153	0.0003	0.54903	102.4	4.6	97.8	1.9	275.0	86.0	97.8	1.9	4.5
13GRT03_84	124.4	1.051	4.359	0.033	0.3073	0.0018	0.67818	1704.2	6.2	1728.9	9.4	1672.7	5.3	1672.7	5.3	3.4
13GRT03_85	87.3	0.841	0.533	0.009	0.0681	0.0008	0.097014	433.7	5.9	424.9	5.1	483.0	35.0	424.9	5.1	2.0
13GRT03_86	143.2	0.784	4.729	0.056	0.3088	0.0038	0.84531	1772.7	9.8	1734.0	19.0	1826.6	8.7	1826.6	8.7	5.1
13GRT03_87	223	1.23	0.105	0.002	0.0155	0.0002	0.19142	100.9	1.8	99.2	1.1	170.0	28.0	99.2	1.1	1.7
13GRT03_88	116.2	1.0708	2.239	0.017	0.2035	0.0013	0.61595	1193.1	5.3	1194.2	7.1	1189.3	7.9	1194.2	7.1	0.1
13GRT03_89	190.7	2.9	1.591	0.031	0.1547	0.0025	0.93523	967.0	12.0	927.0	14.0	1051.1	7.6	927.0	14.0	4.1
13GRT03_90	114.8	1.201	2.204	0.015	0.2028	0.0010	0.37813	1182.2	4.8	1190.1	5.5	1158.8	8.8	1190.1	5.5	0.7
13GRT03_91	87.5	1.027	4.788	0.027	0.3228	0.0020	0.55138	1783.2	4.9	1803.3	9.8	1754.6	7.5	1754.6	7.5	2.8
13GRT03_92	123	1.98	3.262	0.035	0.2621	0.0028	0.82671	1471.4	8.3	1500.0	14.0	1434.6	7.4	1434.6	7.4	4.6
13GRT03_93	60.9	1.1	1.518	0.017	0.1583	0.0012	0.27174	937.1	6.7	947.0	6.6	902.0	11.0	947.0	6.6	1.1
13GRT03_94	104.1	1.39	2.015	0.016	0.1933	0.0016	0.6085	1120.2	5.3	1139.2	8.5	1079.5	9.3	1139.2	8.5	1.7
13GRT03_95	176	0.642	1.726	0.017	0.1719	0.0015	0.81516	1018.0	6.1	1022.7	8.1	1002.0	11.0	1022.7	8.1	0.5
13GRT03_96	71.3	1.489	1.907	0.016	0.1854	0.0014	0.31073	1083.2	5.6	1096.4	7.8	1070.0	11.0	1096.4	7.8	1.2
13GRT03_97	459	0.638	0.347	0.012	0.0438	0.0019	0.96383	301.6	8.8	276.0	12.0	525.0	30.0	276.0	12.0	8.5
13GRT03_98	84	1.265	1.890	0.021	0.1832	0.0019	0.61579	1077.1	7.4	1084.0	10.0	1067.0	10.0	1084.0	10.0	0.6
13GRT03_99	260	1.085	0.107	0.002	0.0159	0.0002	0.022283	102.8	2.2	102.0	1.0	173.0	27.0	102.0	1.0	0.8
13GRT03_100	101.9	0.691	0.550	0.007	0.0716	0.0005	0.11158	445.1	4.4	446.0	3.2	433.0	18.0	446.0	3.2	0.2
13GRT03_101	71.2	0.968	2.035	0.023	0.1912	0.0018	0.65015	1126.7	7.7	1127.5	9.7	1116.0	11.0	1127.5	9.7	0.1
13GRT03_102	14.1	0.491	13.480	0.210	0.5379	0.0052	0.53168	2714.0	15.0	2774.0	22.0	2672.0	18.0	2672.0	18.0	3.8
13GRT03_103	35	1.045	2.494	0.037	0.2145	0.0019	0.39477	1269.0	11.0	1253.0	10.0	1299.0	21.0	1299.0	21.0	3.5
13GRT03_104	98.6	0.978	5.329	0.040	0.3432	0.0024	0.76348	1873.2	6.4	1902.0	12.0	1831.8	4.8	1831.8	4.8	3.8
13GRT03_105	340	2.355	0.606	0.005	0.0774	0.0005	0.49961	481.7	3.3	480.5	3.2	477.0	11.0	480.5	3.2	0.2
13GRT03_106	75.1	0.843	5.556	0.036	0.3483	0.0022	0.66024	1909.0	5.6	1926.0	11.0	1892.6	7.0	1892.6	7.0	1.8
13GRT03_107	68.9	0.852	6.312	0.055	0.3702	0.0034	0.66712	2019.7	7.6	2030.0	16.0	2005.7	8.2	2005.7	8.2	1.2
13GRT03_108	30.5	1.653	5.285	0.074	0.3327	0.0041	0.7417	1865.0	12.0	1851.0	20.0	1894.0	9.1	1894.0	9.1	2.3
13GRT03_109	30.48	1.325	0.679	0.015	0.0822	0.0009	0.25859	525.3	9.0	509.0	5.5	602.0	27.0	509.0	5.5	3.1
13GRT03_110	18.68	0.7216	5.737	0.057	0.3565	0.0033	0.32602	1936.2	8.6	1965.0	15.0	1902.0	11.0	1902.0	11.0	3.3
13GRT03_111	146	1.87	3.678	0.022	0.2803	0.0014	0.56932	1566.4	4.7	1592.8	7.1	1527.3	6.3	1527.3	6.3	4.3

13GRT03_112	29.2	2.5	13.970	0.220	0.5240	0.0077	0.83037	2748.0	14.0	2715.0	33.0	2776.3	8.1	2776.3	8.1	2.2
13GRT03_113	104.5	1.092	0.723	0.011	0.0885	0.0008	0.15727	551.8	6.6	546.4	4.4	576.0	22.0	546.4	4.4	1.0
13GRT03_114	193	1.516	6.019	0.037	0.3575	0.0028	0.70972	1979.1	5.2	1970.0	13.0	1988.4	6.3	1988.4	6.3	0.9
13GRT03_115	40.6	0.5608	13.890	0.095	0.5420	0.0039	0.6835	2741.9	6.5	2791.0	16.0	2701.1	5.4	2701.1	5.4	3.3
13GRT03_116	57.6	1.198	2.213	0.018	0.2037	0.0016	0.2914	1185.0	5.6	1195.1	8.6	1166.5	9.8	1195.1	8.6	0.9
13GRT03_117	306	0.998	4.165	0.046	0.2861	0.0037	0.77479	1667.0	9.0	1622.0	19.0	1725.6	8.1	1725.6	8.1	6.0
13GRT03_118	162	1.325	1.898	0.016	0.1870	0.0012	0.46242	1080.1	5.6	1105.3	6.6	1028.9	9.8	1105.3	6.6	2.3
13GRT03_119	99	1.62	1.978	0.013	0.1886	0.0012	0.30387	1108.3	4.5	1113.9	6.3	1094.2	7.8	1113.9	6.3	0.5
13GRT03_120	187.4	0.6089	3.936	0.025	0.2845	0.0016	0.32493	1621.8	4.9	1613.7	8.0	1631.2	5.4	1631.2	5.4	1.1
13GRT04_1	207.2	1.023	0.514	0.004	0.0681	0.0004	0.37056	420.7	2.9	424.9	2.5	408.0	11.0	424.9	2.5	1.0
13GRT04_2	76.8	2.356	2.181	0.039	0.2003	0.0025	0.81331	1174.0	12.0	1177.0	14.0	1172.0	13.0	1177.0	14.0	0.3
13GRT04_3	91.1	1.801	4.489	0.032	0.3158	0.0020	0.56288	1729.5	6.2	1769.1	9.7	1690.8	7.1	1690.8	7.1	4.6
13GRT04_4	101.5	1.504	1.863	0.016	0.1813	0.0011	0.45408	1067.6	5.8	1073.9	6.1	1049.0	10.0	1073.9	6.1	0.6
13GRT04_5	134.1	1.91	1.881	0.016	0.1820	0.0014	0.61696	1074.3	5.7	1078.1	7.8	1066.6	8.4	1078.1	7.8	0.4
13GRT04_6	53.2	0.985	3.265	0.027	0.2590	0.0020	0.28279	1472.3	6.4	1485.0	10.0	1455.0	11.0	1455.0	11.0	2.1
13GRT04_7	61.7	2.531	11.689	0.085	0.4905	0.0035	0.89431	2579.4	6.9	2572.0	15.0	2590.8	5.4	2590.8	5.4	0.7
13GRT04_8	97.7	1.776	0.126	0.004	0.0187	0.0003	0.026949	120.2	3.3	119.5	1.9	197.0	35.0	119.5	1.9	0.6
13GRT04_9	132	1.324	1.739	0.015	0.1765	0.0013	0.49342	1023.4	5.5	1047.7	7.3	982.7	8.8	1047.7	7.3	2.4
13GRT04_10	169	1.77	1.834	0.015	0.1749	0.0019	0.33048	1057.3	5.5	1039.0	10.0	1091.0	14.0	1039.0	10.0	1.7
13GRT04_11	315	1.05	1.625	0.036	0.1533	0.0040	0.95515	978.0	14.0	919.0	22.0	1123.0	11.0	919.0	22.0	6.0
13GRT04_12	35.5	1.762	2.262	0.028	0.2085	0.0023	0.58449	1199.9	8.6	1221.0	12.0	1168.0	14.0	1168.0	12.0	1.8
13GRT04_13	91.1	1.482	4.864	0.029	0.3263	0.0019	0.6258	1795.7	5.1	1820.3	9.4	1766.1	6.7	1766.1	6.7	3.1
13GRT04_14	126.1	1.362	0.505	0.006	0.0667	0.0005	0.421	415.0	4.1	416.2	2.9	424.0	17.0	416.2	2.9	0.3
13GRT04_15	187	1.09	2.288	0.020	0.2092	0.0019	0.7226	1208.3	6.0	1224.0	10.0	1185.6	8.2	1185.6	10.0	1.3
13GRT04_16	265	1.896	1.894	0.010	0.1853	0.0011	0.45264	1078.7	3.3	1095.9	5.8	1048.1	7.4	1095.9	5.8	1.6
13GRT04_17	98.5	0.998	5.640	0.028	0.3464	0.0019	0.58527	1922.6	4.2	1917.2	9.2	1929.5	4.7	1929.5	4.7	0.6
13GRT04_18	64.2	2.047	3.226	0.030	0.2596	0.0019	0.46077	1462.8	7.2	1487.6	9.9	1425.4	8.7	1425.4	8.7	4.4
13GRT04_19	34.4	0.706	1.865	0.022	0.1795	0.0020	0.36766	1069.5	7.5	1064.0	11.0	1079.0	14.0	1064.0	11.0	0.5
13GRT04_20	122.4	1.572	1.982	0.013	0.1898	0.0014	0.55642	1109.2	4.4	1120.0	7.6	1088.9	8.7	1120.0	7.6	1.0
13GRT04_21	16.6	0.827	1.865	0.039	0.1785	0.0027	0.58834	1069.0	14.0	1061.0	14.0	1107.0	21.0	1061.0	14.0	0.7
13GRT04_22	144.8	1.395	0.103	0.002	0.0153	0.0002	0.088042	99.7	2.3	98.1	1.3	190.0	28.0	98.1	1.3	1.6
13GRT04_23	149	1.623	0.700	0.007	0.0874	0.0007	0.38658	538.6	4.4	539.8	4.4	531.0	14.0	539.8	4.4	0.2
13GRT04_24	23.55	1.343	2.230	0.031	0.2046	0.0021	0.20253	1189.7	9.6	1200.0	11.0	1163.0	19.0	1163.0	11.0	0.9

13GRT04_25	125.5	0.806	0.399	0.005	0.0545	0.0005	0.47048	341.0	3.8	341.9	3.3	340.0	17.0	341.9	3.3	0.3
13GRT04_26	42.72	0.743	1.516	0.047	0.1390	0.0026	0.16842	936.0	19.0	839.0	15.0	1184.0	44.0	839.0	15.0	10.4
13GRT04_26	32.8	0.815	1.806	0.042	0.1684	0.0036	0.65639	1048.0	16.0	1003.0	20.0	1156.0	22.0	1003.0	20.0	4.3
13GRT04_27	87	2.208	2.084	0.016	0.1973	0.0013	0.49114	1144.8	5.3	1160.6	7.0	1121.3	8.2	1160.6	7.0	1.4
13GRT04_28	245	1.58	1.879	0.048	0.1707	0.0034	0.48665	1071.0	17.0	1015.0	19.0	1193.0	32.0	1015.0	19.0	5.2
13GRT04_29	102.2	2	1.887	0.016	0.1823	0.0014	0.56171	1076.2	5.7	1079.7	7.5	1060.5	7.9	1079.7	7.5	0.3
13GRT04_30	141	0.824	9.190	0.180	0.4378	0.0046	0.90191	2356.0	18.0	2340.0	21.0	2371.0	17.0	2371.0	17.0	1.3
13GRT04_31	76.4	0.604	4.100	0.074	0.2622	0.0050	0.82832	1654.0	15.0	1501.0	25.0	1853.0	11.0	1853.0	11.0	19.0
13GRT04_31	46.2	0.752	5.052	0.050	0.3264	0.0026	0.54585	1827.6	8.3	1821.0	13.0	1844.0	13.0	1844.0	13.0	1.2
13GRT04_32	115.5	1.635	4.832	0.031	0.3230	0.0022	0.64884	1790.2	5.4	1804.0	10.0	1773.1	5.4	1773.1	5.4	1.7
13GRT04_33	81.6	0.7133	5.212	0.036	0.3391	0.0025	0.49424	1854.3	5.8	1882.0	12.0	1823.7	9.2	1823.7	9.2	3.2
13GRT04_34	68.9	0.7788	5.937	0.040	0.3578	0.0026	0.52125	1967.0	5.7	1971.0	12.0	1961.9	6.4	1961.9	6.4	0.5
13GRT04_35	83.9	1.07	3.152	0.024	0.2526	0.0018	0.62089	1445.2	5.8	1451.8	9.3	1439.4	7.5	1439.4	7.5	0.9
13GRT04_36	121.8	0.942	2.936	0.023	0.2375	0.0025	0.84868	1393.1	6.0	1374.0	13.0	1434.4	7.8	1434.4	7.8	4.2
13GRT04_37	167.1	1.201	2.940	0.020	0.2405	0.0016	0.42138	1392.6	5.2	1389.4	8.4	1395.6	9.0	1395.6	9.0	0.4
13GRT04_38	62.1	0.806	4.922	0.036	0.3182	0.0022	0.55239	1805.6	6.1	1781.0	11.0	1836.6	8.0	1836.6	8.0	3.0
13GRT04_39	17	0.792	5.209	0.064	0.3382	0.0030	0.19397	1853.0	11.0	1878.0	15.0	1825.0	18.0	1825.0	18.0	2.9
13GRT04_40	38.7	0.784	5.309	0.051	0.3425	0.0032	0.44932	1869.6	8.2	1898.0	15.0	1836.7	9.8	1836.7	9.8	3.3
13GRT04_41	50.7	1.927	5.625	0.040	0.3498	0.0026	0.52681	1921.2	5.9	1933.0	12.0	1903.7	7.1	1903.7	7.1	1.5
13GRT04_42	277	6.63	2.164	0.055	0.1837	0.0035	0.92137	1168.0	18.0	1087.0	19.0	1315.0	17.0	1087.0	19.0	6.9
13GRT04_43	256.2	1.651	1.784	0.024	0.1743	0.0018	0.90303	1039.2	8.9	1035.7	9.8	1046.0	12.0	1035.7	9.8	0.3
13GRT04_44	196.8	2.835	1.828	0.018	0.1751	0.0015	0.75686	1056.1	6.4	1040.0	8.5	1088.9	7.2	1040.0	8.5	1.5
13GRT04_45	263	0.944	4.412	0.033	0.3046	0.0021	0.49613	1715.2	6.0	1714.0	10.0	1715.3	6.0	1715.3	6.0	0.1
13GRT04_46	111.3	1.122	9.554	0.079	0.4357	0.0038	0.78513	2392.3	7.6	2333.0	16.0	2445.9	5.4	2445.9	5.4	4.6
13GRT04_47	100	1.9	2.239	0.025	0.2083	0.0023	0.6838	1192.7	7.9	1219.0	12.0	1145.0	10.0	1145.0	12.0	2.2
13GRT04_48	52.6	1.391	1.912	0.031	0.1819	0.0027	0.90514	1084.0	11.0	1077.0	15.0	1100.0	11.0	1077.0	15.0	0.6
13GRT04_49	138.2	1.02	3.642	0.041	0.2523	0.0031	0.8929	1558.1	9.0	1450.0	16.0	1702.6	7.5	1702.6	7.5	14.8
13GRT04_50	81.1	0.7645	13.327	0.083	0.5269	0.0034	0.62706	2702.8	5.9	2728.0	14.0	2683.4	4.8	2683.4	4.8	1.7
13GRT04_51	168.2	2.368	2.297	0.013	0.2109	0.0013	0.62446	1211.1	4.1	1233.4	7.0	1166.0	6.7	1166.0	7.0	1.8
13GRT04_52	118.8	1.109	1.956	0.013	0.1822	0.0014	0.3921	1100.2	4.5	1079.1	7.5	1147.5	9.0	1079.1	7.5	1.9
13GRT04_53	475.3	1.605	0.115	0.002	0.0161	0.0001	0.21148	110.5	2.1	103.2	0.9	256.0	36.0	103.2	0.9	6.6
13GRT04_54	438	6.28	4.761	0.062	0.3151	0.0041	0.94716	1777.0	11.0	1765.0	20.0	1787.9	4.5	1787.9	4.5	1.3
13GRT04_55	86.5	1.326	2.177	0.050	0.1941	0.0013	0.62096	1171.0	15.0	1143.3	6.8	1234.0	41.0	1143.3	6.8	2.4
13GRT04_56	114.1	1.655	2.032	0.015	0.1941	0.0012	0.26986	1126.1	4.9	1143.3	6.4	1092.2	8.9	1143.3	6.4	1.5
13GRT04_57	50.1	0.4869	6.172	0.042	0.3726	0.0033	0.52025	2000.1	6.0	2041.0	16.0	1962.8	7.3	1962.8	7.3	4.0

13GRT04_58	97.5	1.48	1.978	0.016	0.1916	0.0014	0.49662	1107.6	5.5	1130.0	7.8	1068.9	9.8	1130.0	7.8	2.0
13GRT04_59	86	0.372	1.017	0.072	0.0433	0.0027	0.36472	705.0	36.0	273.0	17.0	2610.0	130.0	DISC	DISC	89.5
13GRT04_60	49.4	0.4319	5.322	0.039	0.3421	0.0025	0.43138	1872.8	6.4	1897.0	12.0	1840.8	7.9	1840.8	7.9	3.1
13GRT04_61	42	0.875	2.014	0.019	0.1924	0.0013	0.31781	1120.0	6.3	1134.0	7.3	1090.0	13.0	1134.0	7.3	1.3
13GRT04_62	64.5	1.7	13.090	0.130	0.5131	0.0049	0.92433	2685.4	9.2	2669.0	21.0	2693.4	8.1	2693.4	8.1	0.9
13GRT04_63	60.7	1.321	5.797	0.037	0.3587	0.0023	0.43407	1945.7	5.5	1976.0	11.0	1911.2	7.6	1911.2	7.6	3.4
13GRT04_64	122.6	1.269	2.255	0.017	0.2071	0.0017	0.50541	1197.9	5.5	1213.3	8.9	1170.3	9.7	1170.3	8.9	1.3
13GRT04_65	24.81	1.156	1.875	0.027	0.1810	0.0020	0.45393	1071.4	9.4	1072.0	11.0	1078.0	17.0	1072.0	11.0	0.1
13GRT04_66	160	2.36	1.704	0.020	0.1717	0.0017	0.76726	1009.6	7.6	1021.1	9.6	987.5	9.1	1021.1	9.6	1.1
13GRT04_67	30.4	1.049	1.905	0.028	0.1837	0.0018	0.33127	1081.9	9.7	1087.0	10.0	1075.0	16.0	1087.0	10.0	0.5
13GRT04_68	34	1.886	1.789	0.019	0.1749	0.0015	0.22162	1041.1	6.8	1038.7	8.0	1064.0	13.0	1038.7	8.0	0.2
13GRT04_69	81.9	1.279	0.091	0.003	0.0135	0.0003	0.08011	88.1	2.6	86.5	1.6	256.0	45.0	86.5	1.6	1.8
13GRT04_70	61.9	2.635	2.668	0.027	0.2288	0.0023	0.52806	1320.2	7.7	1328.0	12.0	1301.0	10.0	1301.0	10.0	2.1
13GRT04_71	110	4.3	2.048	0.022	0.1935	0.0021	0.65198	1132.0	7.4	1140.0	12.0	1109.0	11.0	1140.0	12.0	0.7
13GRT04_72	67.2	1.666	2.421	0.031	0.2073	0.0020	0.45005	1249.3	9.5	1214.0	10.0	1304.0	16.0	1304.0	16.0	6.9
13GRT04_73	23.16	1	2.749	0.030	0.2319	0.0023	0.2593	1343.3	8.0	1344.0	12.0	1339.0	12.0	1339.0	12.0	0.4
13GRT04_74	164.1	0.819	3.057	0.020	0.2454	0.0016	0.75072	1422.5	5.1	1414.8	8.3	1429.2	6.3	1429.2	6.3	1.0
13GRT04_75	236	1.995	0.259	0.005	0.0357	0.0003	0.19974	233.7	4.2	226.2	2.1	314.0	38.0	226.2	2.1	3.2
13GRT04_76	163	1.87	2.002	0.013	0.1912	0.0015	0.5079	1116.0	4.5	1128.0	8.2	1085.2	7.9	1128.0	8.2	1.1
13GRT04_77	52.9	1.528	1.964	0.024	0.1843	0.0015	0.34215	1102.8	8.0	1090.3	7.9	1125.0	16.0	1090.3	7.9	1.1
13GRT04_78	28.6	1.455	13.499	0.091	0.5189	0.0042	0.61885	2714.9	6.4	2694.0	18.0	2722.6	5.5	2722.6	5.5	1.1
13GRT04_79	101.5	1.436	2.948	0.020	0.2448	0.0015	0.60815	1394.0	5.2	1411.4	7.7	1369.2	7.4	1369.2	7.4	3.1
13GRT04_80	219	1.682	1.667	0.017	0.1502	0.0012	0.55229	995.8	6.5	902.1	6.5	1196.0	14.0	902.1	6.5	9.4
13GRT04_81	175	0.93	2.761	0.029	0.2259	0.0026	0.94133	1344.6	7.9	1313.0	14.0	1391.8	6.6	1391.8	6.6	5.7
13GRT04_82	53.4	0.84	13.689	0.084	0.5329	0.0043	0.70032	2728.1	5.8	2755.0	18.0	2710.6	5.1	2710.6	5.1	1.6
13GRT04_83	16.11	0.859	2.545	0.054	0.2156	0.0036	0.40887	1283.0	15.0	1258.0	19.0	1366.0	23.0	1366.0	23.0	7.9
13GRT04_84	89.9	1.552	1.731	0.013	0.1744	0.0011	0.30781	1020.7	4.8	1036.1	5.8	987.0	11.0	1036.1	5.8	1.5
13GRT04_85	25.16	1.043	2.220	0.140	0.1371	0.0032	0.4917	1185.0	44.0	828.0	18.0	1911.0	91.0	DISC	DISC	56.7
13GRT04_85	12.85	1.166	1.903	0.053	0.1825	0.0034	0.24243	1085.0	17.0	1080.0	18.0	1072.0	38.0	1080.0	18.0	0.5
13GRT04_86	45.3	0.889	2.047	0.036	0.1910	0.0017	0.39448	1130.0	12.0	1126.9	9.2	1124.0	21.0	1126.9	9.2	0.3
13GRT04_87	28.1	0.964	2.791	0.033	0.2378	0.0025	0.42826	1352.5	8.8	1375.0	13.0	1315.0	15.0	1315.0	15.0	4.6
13GRT04_88	69.9	0.5305	5.811	0.043	0.3572	0.0025	0.58774	1947.7	6.5	1969.0	12.0	1933.5	6.5	1933.5	6.5	1.8
13GRT04_89	32.2	0.984	2.050	0.034	0.1893	0.0021	0.47953	1131.0	11.0	1118.0	11.0	1166.0	19.0	1118.0	11.0	1.1
13GRT04_90	127	1.285	1.981	0.013	0.1901	0.0013	0.48181	1109.6	4.4	1122.0	7.3	1079.6	9.2	1122.0	7.3	1.1
13GRT04_91	108.1	2.07	4.184	0.045	0.2937	0.0020	0.78311	1670.1	9.0	1660.0	10.0	1686.0	9.7	1686.0	9.7	1.5

13GRT04_92	76.5	0.5589	0.841	0.010	0.1003	0.0010	0.20254	620.2	5.6	616.3	5.8	621.0	18.0	616.3	5.8	0.6
13GRT04_93	167.7	0.964	1.933	0.012	0.1868	0.0013	0.44761	1092.4	4.3	1103.7	6.8	1070.3	9.4	1103.7	6.8	1.0
13GRT04_94	299.7	1.136	2.757	0.029	0.2326	0.0028	0.88449	1345.0	7.4	1348.0	15.0	1338.8	7.9	1338.8	7.9	0.7
13GRT04_95	161	1.244	1.999	0.015	0.1912	0.0013	0.43396	1114.9	5.0	1128.0	6.9	1092.0	9.8	1128.0	6.9	1.2
13GRT04_96	115	0.911	2.356	0.015	0.2106	0.0014	0.685	1229.2	4.5	1231.8	7.7	1223.0	6.5	1223.0	6.5	0.7
13GRT04_97	98.4	1.558	1.917	0.021	0.1836	0.0015	0.40658	1086.7	7.1	1086.6	8.2	1088.0	14.0	1086.6	8.2	0.0
13GRT04_98	89.9	1.105	6.032	0.039	0.3663	0.0021	0.50621	1980.2	5.7	2012.0	9.9	1947.2	7.4	1947.2	7.4	3.3
13GRT04_99	40	1.217	2.020	0.025	0.1931	0.0021	0.46374	1122.7	8.5	1138.0	12.0	1085.0	15.0	1138.0	12.0	1.4
13GRT04_100	64.8	0.669	1.740	0.025	0.1696	0.0023	0.77332	1022.7	9.2	1010.0	13.0	1052.0	11.0	1010.0	13.0	1.2
13GRT04_101	34.3	0.717	5.240	0.042	0.3399	0.0029	0.5333	1858.8	6.8	1888.0	14.0	1835.3	7.8	1835.3	7.8	2.9
13GRT04_102	75.7	1.046	4.876	0.043	0.3266	0.0023	0.72151	1797.7	7.3	1822.0	11.0	1769.4	7.5	1769.4	7.5	3.0
13GRT04_103	215.8	2.755	1.829	0.011	0.1792	0.0009	0.56567	1055.8	4.1	1062.7	5.1	1029.8	6.8	1062.7	5.1	0.7
13GRT04_104	97.1	1.027	3.647	0.026	0.2799	0.0020	0.69169	1559.6	5.7	1591.0	9.9	1512.2	6.1	1512.2	6.1	5.2
13GRT04_105	81.3	0.68	3.201	0.023	0.2578	0.0017	0.60527	1457.2	5.5	1478.3	8.9	1428.1	6.8	1428.1	6.8	3.5
13GRT04_106	183	1.212	1.949	0.016	0.1866	0.0015	0.62378	1097.9	5.5	1102.7	8.1	1089.7	8.3	1102.7	8.1	0.4
13GRT04_107	197	1.52	12.810	0.170	0.5142	0.0072	0.8229	2665.0	13.0	2674.0	31.0	2648.2	8.4	2648.2	8.4	1.0
13GRT04_108	383	1.677	1.865	0.014	0.1790	0.0014	0.62149	1068.6	4.8	1061.2	7.4	1089.0	10.0	1061.2	7.4	0.7
13GRT04_109	71.2	0.8934	1.991	0.019	0.1867	0.0017	0.43928	1112.8	6.5	1103.3	9.1	1123.0	12.0	1103.3	9.1	0.9
13GRT04_110	49.5	0.911	7.020	0.064	0.3966	0.0035	0.65794	2114.4	8.0	2155.0	16.0	2078.6	7.2	2078.6	7.2	3.7
13GRT04_112	66.2	1.49	2.087	0.020	0.1991	0.0020	0.51146	1145.1	6.5	1171.0	11.0	1092.0	11.0	1171.0	11.0	2.3
13GRT04_113	15.88	1.099	5.669	0.072	0.3568	0.0039	0.75232	1926.0	11.0	1967.0	18.0	1888.5	8.4	1888.5	8.4	4.2
13GRT04_114	132	1.257	2.079	0.015	0.1969	0.0013	0.43505	1141.6	4.9	1158.5	7.0	1105.7	9.6	1158.5	7.0	1.5
13GRT04_115	40.4	0.575	1.772	0.028	0.1737	0.0020	0.59219	1034.0	10.0	1032.0	11.0	1034.0	12.0	1032.0	11.0	0.2
13GRT04_117	603	1.903	0.851	0.007	0.0954	0.0012	0.080252	624.9	3.8	587.2	6.9	775.0	28.0	587.2	6.9	6.0
13GRT04_118	271.4	1.066	2.383	0.021	0.2029	0.0024	0.76506	1237.2	6.4	1191.0	13.0	1318.0	11.0	1191.0	13.0	3.7
13GRT04_119	28.7	1.046	0.918	0.016	0.1080	0.0012	0.21674	660.4	8.3	660.9	6.8	670.0	23.0	660.9	6.8	0.1
13GRT04_120	64.4	1.747	1.824	0.021	0.1748	0.0024	0.62676	1053.5	7.5	1038.0	13.0	1095.0	24.0	1038.0	13.0	1.5
13GRT04_121	584	4.82	0.595	0.008	0.0716	0.0014	0.29557	474.0	4.7	445.6	8.6	589.0	52.0	445.6	8.6	6.0
13WSUN_1	144.7	3.11	0.569	0.006	0.0732	0.0008	0.36878	457.1	3.9	455.5	4.5	474.0	19.0	455.5	4.5	0.4
13WSUN_2	467	67.6	1.699	0.011	0.1691	0.0011	0.61646	1008.1	4.2	1006.9	6.2	1009.8	7.9	1006.9	6.2	0.1
13WSUN_3	72.3	1.939	1.630	0.020	0.1641	0.0018	0.3654	981.2	7.6	979.4	9.8	979.0	14.0	979.4	9.8	0.2
13WSUN_4	59.8	3.978	0.265	0.009	0.0373	0.0007	0.31156	238.0	7.4	236.0	4.2	341.0	41.0	236.0	4.2	0.8
13WSUN_5	101.2	1.343	5.122	0.061	0.3321	0.0047	0.54721	1841.0	10.0	1848.0	23.0	1832.0	15.0	1832.0	15.0	0.9

13WSUN_6	167.7	1.87	3.527	0.073	0.2472	0.0045	0.88778	1537.0	17.0	1423.0	23.0	1705.0	11.0	1705.0	11.0	16.5
13WSUN_7	152.6	0.975	0.883	0.012	0.1057	0.0013	0.25873	642.0	6.5	647.5	7.7	653.0	19.0	647.5	7.7	0.9
13WSUN_8	88.3	1.176	4.840	0.200	0.2868	0.0030	0.19212	1782.0	33.0	1627.0	14.0	1972.0	68.0	1972.0	68.0	17.5
13WSUN_9	77.2	1.23	15.350	0.140	0.5499	0.0045	0.62123	2837.0	8.8	2824.0	19.0	2842.7	7.1	2842.7	7.1	0.7
13WSUN_10	49.3	1.709	1.711	0.024	0.1715	0.0017	0.11092	1011.9	9.2	1021.5	8.9	996.0	16.0	1021.5	8.9	0.9
13WSUN_11	332	1.593	0.106	0.002	0.0158	0.0002	0.23392	102.3	2.1	101.0	1.1	160.0	34.0	101.0	1.1	1.3
13WSUN_12	49.4	1.096	3.760	0.052	0.2461	0.0032	0.6688	1585.0	11.0	1418.0	17.0	1809.0	12.0	1809.0	12.0	21.6
13WSUN_13	6.78	1.072	1.515	0.057	0.1525	0.0035	0.25908	932.0	23.0	915.0	20.0	999.0	46.0	915.0	20.0	1.8
13WSUN_14	5.87	0.797	11.780	0.190	0.4616	0.0084	0.67612	2588.0	15.0	2444.0	37.0	2707.0	17.0	2707.0	17.0	9.7
13WSUN_15	34.14	1.397	2.266	0.036	0.1931	0.0027	0.40333	1203.0	12.0	1138.0	15.0	1319.0	21.0	1138.0	15.0	5.4
13WSUN_16	6.35	1.26	0.674	0.039	0.0862	0.0029	0.086721	522.0	23.0	533.0	17.0	561.0	64.0	533.0	17.0	2.1
13WSUN_17	6.91	2.97	1.420	0.085	0.1360	0.0052	0.12393	899.0	34.0	821.0	30.0	1098.0	71.0	821.0	30.0	8.7
13WSUN_18	11.16	1.068	1.856	0.050	0.1684	0.0036	0.43115	1063.0	18.0	1008.0	19.0	1174.0	31.0	1008.0	19.0	5.2
13WSUN_19	2.59	0.483	10.110	0.310	0.4330	0.0120	0.13732	2444.0	30.0	2315.0	53.0	2593.0	42.0	2593.0	42.0	10.7
13WSUN_20	17.74	0.647	0.079	0.011	0.0122	0.0006	0.16028	77.0	11.0	77.9	4.0	440.0	110.0	77.9	4.0	1.2
13WSUN_21	9.68	0.837	0.144	0.015	0.0214	0.0013	0.14887	136.0	13.0	136.4	8.4	470.0	140.0	136.4	8.4	0.3
13WSUN_22	4.81	0.545	3.570	0.160	0.2461	0.0089	0.32429	1543.0	34.0	1417.0	46.0	1739.0	57.0	1739.0	57.0	18.5
13WSUN_23	8.11	0.853	8.700	0.220	0.3647	0.0092	0.56977	2307.0	24.0	2002.0	44.0	2570.0	24.0	2570.0	24.0	22.1
13WSUN_24	7.96	0.797	0.680	0.034	0.0845	0.0032	0.38904	524.0	20.0	522.0	19.0	601.0	71.0	522.0	19.0	0.4
13WSUN_25	305	1.977	4.516	0.031	0.3194	0.0026	0.72032	1733.7	5.7	1786.0	13.0	1672.4	4.9	1672.4	4.9	6.8
13WSUN_26	100.5	0.4386	0.926	0.012	0.1081	0.0013	0.43588	665.4	6.3	661.8	7.6	674.0	18.0	661.8	7.6	0.5
13WSUN_27	158.8	1.284	3.515	0.039	0.2681	0.0034	0.67962	1529.9	8.7	1531.0	17.0	1509.0	11.0	1509.0	11.0	1.5
13WSUN_28	49.9	0.4292	2.471	0.033	0.2156	0.0026	0.66328	1263.8	9.7	1258.0	14.0	1264.0	11.0	1264.0	11.0	0.5
13WSUN_29	158.4	0.7783	2.293	0.024	0.2064	0.0020	0.65106	1209.7	7.3	1210.0	11.0	1204.8	8.8	1204.8	8.8	0.4
13WSUN_30	155.9	2.162	2.152	0.026	0.1948	0.0013	0.3521	1165.1	8.3	1147.1	7.0	1196.0	18.0	1147.1	7.0	1.5
13WSUN_31	9.9	0.2451	8.300	0.220	0.0879	0.0030	0.29236	2267.0	26.0	543.0	18.0	4732.0	32.0	DISC	DISC	88.5
13WSUN_31	4.4	0.2632	13.300	0.470	0.1290	0.0054	0.54222	2703.0	35.0	782.0	31.0	4769.0	32.0	DISC	DISC	83.6
13WSUN_32	247	2.41	1.992	0.026	0.1821	0.0025	0.82972	1112.0	8.9	1078.0	14.0	1169.0	10.0	1078.0	14.0	3.1
13WSUN_33	368	2.302	2.098	0.019	0.1860	0.0020	0.77408	1147.9	6.4	1099.0	11.0	1237.1	9.4	1099.0	11.0	4.3
13WSUN_34	136.2	2.853	2.696	0.040	0.2219	0.0031	0.77507	1328.0	11.0	1291.0	16.0	1356.0	13.0	1356.0	13.0	4.8
13WSUN_35	165	0.832	4.546	0.028	0.3069	0.0022	0.6783	1739.7	5.0	1725.0	11.0	1761.0	5.0	1761.0	5.0	2.0
13WSUN_36	241	1.23	0.547	0.006	0.0679	0.0008	0.34979	443.0	3.8	423.2	4.6	550.0	16.0	423.2	4.6	4.5
13WSUN_37	93.5	0.447	0.509	0.008	0.0660	0.0008	0.34681	418.0	5.7	412.2	5.0	432.0	19.0	412.2	5.0	1.4
13WSUN_38	65.95	0.592	1.695	0.015	0.1657	0.0017	0.20589	1006.5	5.7	988.2	9.4	1046.0	15.0	988.2	9.4	1.8
13WSUN_39	169	1.002	0.870	0.011	0.1032	0.0010	0.53809	635.4	6.1	633.1	6.0	636.0	15.0	633.1	6.0	0.4

13WSUN_40	29.3	0.921	1.690	0.032	0.1675	0.0017	0.094499	1005.0	12.0	998.1	9.6	1033.0	25.0	998.1	9.6	0.7
13WSUN_41	517	5.7	4.823	0.030	0.3179	0.0023	0.67011	1788.6	5.2	1779.0	11.0	1802.2	6.7	1802.2	6.7	1.3
13WSUN_42	154.6	1.97	0.844	0.014	0.1000	0.0014	0.54336	621.7	7.3	614.5	8.4	655.0	20.0	614.5	8.4	1.2
13WSUN_43	354	3.794	4.764	0.037	0.3171	0.0030	0.70407	1779.0	6.7	1777.0	14.0	1778.9	7.4	1778.9	7.4	0.1
13WSUN_44	115.1	0.7513	2.313	0.044	0.2112	0.0047	0.54518	1216.0	13.0	1235.0	25.0	1174.0	24.0	1174.0	25.0	1.6
13WSUN_45	400.4	2.39	0.580	0.006	0.0752	0.0006	0.42029	464.8	3.7	467.4	3.8	473.3	9.6	467.4	3.8	0.6
13WSUN_46	136.8	0.5624	13.260	0.130	0.5153	0.0055	0.65309	2698.2	9.2	2679.0	23.0	2722.0	12.0	2722.0	12.0	1.6
13WSUN_47	396	0.798	0.613	0.006	0.0779	0.0008	0.63146	485.3	3.8	483.5	4.8	495.0	12.0	483.5	4.8	0.4
13WSUN_48	111.5	1.406	11.300	0.093	0.4874	0.0044	0.70121	2547.7	7.6	2561.0	19.0	2541.4	6.1	2541.4	6.1	0.8
13WSUN_49	277	4.41	3.718	0.026	0.2833	0.0021	0.69502	1574.9	5.5	1610.0	11.0	1522.2	5.8	1522.2	5.8	5.8
13WSUN_50	174.5	0.786	1.960	0.012	0.1874	0.0010	0.23024	1101.7	4.2	1107.1	5.3	1082.4	9.5	1107.1	5.3	0.5
13WSUN_51	109.4	1.692	4.466	0.077	0.3017	0.0065	0.76157	1724.0	14.0	1704.0	31.0	1751.0	18.0	1751.0	18.0	2.7
13WSUN_52	159.6	4.85	0.544	0.008	0.0699	0.0009	0.45981	440.7	5.1	435.3	5.4	456.0	18.0	435.3	5.4	1.2
13WSUN_53	68.6	0.594	0.827	0.013	0.0987	0.0010	0.34725	612.6	7.1	607.0	5.9	615.0	20.0	607.0	5.9	0.9
13WSUN_54	70.6	0.524	14.500	0.120	0.5529	0.0050	0.70033	2782.6	8.0	2837.0	21.0	2749.9	6.2	2749.9	6.2	3.2
13WSUN_55	63.2	1.194	2.684	0.038	0.2279	0.0034	0.57869	1323.0	11.0	1323.0	18.0	1322.0	15.0	1322.0	15.0	0.1
13WSUN_56	284.9	1.768	5.437	0.036	0.3422	0.0021	0.57966	1890.5	5.7	1897.0	10.0	1882.8	7.1	1882.8	7.1	0.8
13WSUN_57	160.7	1.43	0.139	0.004	0.0182	0.0003	0.19947	131.8	3.4	116.2	1.7	419.0	39.0	116.2	1.7	11.8
13WSUN_58	327	1.375	2.097	0.014	0.1947	0.0014	0.55544	1147.7	4.5	1147.0	7.8	1154.3	9.1	1147.0	7.8	0.1
13WSUN_59	61.8	0.589	3.537	0.034	0.2723	0.0029	0.52018	1535.1	7.7	1552.0	15.0	1495.0	12.0	1495.0	12.0	3.8
13WSUN_60	406	6.8	2.158	0.023	0.1964	0.0020	0.6922	1168.5	7.0	1156.0	11.0	1187.0	10.0	1156.0	11.0	1.1
13WSUN_61	97.7	0.9811	3.794	0.035	0.2824	0.0025	0.63544	1591.9	7.2	1603.0	13.0	1580.5	8.5	1580.5	8.5	1.4
13WSUN_62	65.9	0.8101	4.245	0.038	0.3021	0.0023	0.55054	1682.3	7.4	1701.0	12.0	1663.1	9.4	1663.1	9.4	2.3
13WSUN_63	59.2	0.873	1.489	0.024	0.1509	0.0023	0.59329	925.5	9.8	906.0	13.0	1002.0	17.0	906.0	13.0	2.1
13WSUN_64	87	0.941	0.887	0.017	0.1026	0.0012	0.10358	643.9	8.8	629.5	6.8	681.0	24.0	629.5	6.8	2.2
13WSUN_65	268.1	0.876	0.564	0.008	0.0734	0.0008	0.50602	454.8	5.4	456.5	4.7	460.0	17.0	456.5	4.7	0.4
13WSUN_66	382	1.261	0.409	0.005	0.0562	0.0006	0.49829	348.1	3.5	352.5	3.6	319.0	14.0	352.5	3.6	1.3
13WSUN_67	53.2	0.655	4.062	0.046	0.2926	0.0036	0.58919	1647.1	9.4	1656.0	18.0	1629.0	11.0	1629.0	11.0	1.7
13WSUN_68	71.8	1.429	1.961	0.018	0.1877	0.0019	0.33625	1101.8	6.3	1109.0	10.0	1094.0	13.0	1109.0	10.0	0.7
13WSUN_69	32.2	2.52	0.964	0.023	0.1107	0.0020	0.0037944	684.0	12.0	676.0	11.0	725.0	33.0	676.0	11.0	1.2
13WSUN_70	17.47	0.957	4.880	0.460	0.2925	0.0093	0.62807	1778.0	68.0	1653.0	46.0	1947.0	99.0	1947.0	99.0	15.1
13WSUN_71	215	18.4	0.750	0.063	0.0851	0.0036	0.25808	566.0	36.0	527.0	21.0	691.0	83.0	527.0	21.0	6.9
13WSUN_71	80.5	2.392	1.819	0.018	0.1786	0.0014	0.084788	1052.2	6.6	1059.1	7.9	1045.0	15.0	1059.1	7.9	0.7
13WSUN_72	158	1.307	0.100	0.003	0.0150	0.0003	0.083627	97.0	2.5	96.1	1.7	206.0	32.0	96.1	1.7	0.9
13WSUN_73	101.4	1.592	2.841	0.034	0.2325	0.0028	0.40478	1366.8	8.8	1347.0	15.0	1399.0	13.0	1399.0	13.0	3.7

13WSUN_74	164.1	1.657	0.098	0.003	0.0149	0.0002	0.011356	94.9	2.4	95.4	1.5	173.0	26.0	95.4	1.5	0.5
13WSUN_75	16.4	1.385	1.966	0.039	0.1901	0.0031	0.67075	1105.0	14.0	1121.0	17.0	1098.0	27.0	1121.0	17.0	1.4
13WSUN_76	85.2	1.429	3.011	0.026	0.2485	0.0021	0.44869	1410.1	6.7	1434.0	11.0	1379.4	8.9	1379.4	8.9	4.0
13WSUN_77	110.5	1.076	1.455	0.017	0.1535	0.0015	0.54047	911.4	6.8	920.5	8.2	891.0	13.0	920.5	8.2	1.0
13WSUN_78	161.1	2.93	3.154	0.031	0.2545	0.0026	0.70831	1445.5	7.6	1461.0	13.0	1410.8	8.6	1410.8	8.6	3.6
13WSUN_79	28.86	0.3677	5.425	0.085	0.3551	0.0047	0.49893	1887.0	13.0	1958.0	23.0	1820.0	17.0	1820.0	17.0	7.6
13WSUN_80	70.5	0.642	2.712	0.037	0.2306	0.0029	0.12678	1331.0	10.0	1338.0	15.0	1326.0	26.0	1326.0	26.0	0.9
13WSUN_81	352	0.6	0.524	0.007	0.0670	0.0007	0.4523	427.3	4.9	418.2	4.0	461.0	22.0	418.2	4.0	2.1
13WSUN_82	112.6	1.18	5.347	0.061	0.3406	0.0033	0.34831	1876.0	9.8	1889.0	16.0	1870.0	12.0	1870.0	12.0	1.0
13WSUN_83	113.9	2.221	2.761	0.029	0.2322	0.0023	0.29596	1344.4	7.7	1346.0	12.0	1344.0	12.0	1344.0	12.0	0.1
13WSUN_84	93.7	1.74	1.972	0.019	0.1904	0.0015	0.22323	1105.6	6.6	1123.5	8.4	1085.0	11.0	1123.5	8.4	1.6
13WSUN_85	14.05	0.1549	3.122	0.060	0.0526	0.0017	0.10203	1436.0	15.0	331.0	10.0	4049.0	23.0	DISC	DISC	91.8
13WSUN_86	407	4.16	1.728	0.015	0.1752	0.0018	0.76987	1018.7	5.7	1040.5	9.7	985.5	7.7	1040.5	9.7	2.1
13WSUN_86	168.9	1.744	1.997	0.024	0.1910	0.0020	0.47458	1114.2	8.1	1127.0	11.0	1082.0	19.0	1127.0	11.0	1.1
13WSUN_87	189.5	1.274	0.113	0.004	0.0165	0.0002	0.16163	108.7	3.4	105.3	1.2	242.0	42.0	105.3	1.2	3.1
13WSUN_88	117	5.26	1.823	0.025	0.1789	0.0022	0.55625	1054.1	9.1	1061.0	12.0	1049.0	18.0	1061.0	12.0	0.7
13WSUN_89	41.67	1.731	3.296	0.047	0.2553	0.0026	0.3537	1479.0	11.0	1465.0	13.0	1499.0	17.0	1499.0	17.0	2.3
13WSUN_90	48.41	1.336	30.600	0.210	0.7387	0.0059	0.55814	3505.9	6.7	3568.0	22.0	3472.0	5.0	3472.0	5.0	2.8
13WSUN_91	161.3	16.3	0.637	0.017	0.0768	0.0011	0.3407	500.0	11.0	476.8	6.3	619.0	34.0	476.8	6.3	4.6
13WSUN_92	115.7	1.72	1.846	0.034	0.1777	0.0020	0.44678	1061.0	12.0	1054.0	11.0	1079.0	28.0	1054.0	11.0	0.7
13WSUN_94	124.7	1.462	1.844	0.022	0.1825	0.0017	0.02115	1060.6	7.8	1082.0	9.4	1044.0	27.0	1082.0	9.4	2.0
13WSUN_95	59	2.09	1.738	0.039	0.1745	0.0035	0.70262	1022.0	15.0	1037.0	19.0	1000.0	15.0	1037.0	19.0	1.5
13WSUN_96	50.1	0.566	1.874	0.023	0.1817	0.0019	0.30964	1071.2	8.1	1076.0	10.0	1080.0	16.0	1076.0	10.0	0.4
13WSUN_97	155.1	34.1	1.663	0.014	0.1686	0.0012	0.30618	994.5	5.2	1004.2	6.7	983.0	11.0	1004.2	6.7	1.0
13WSUN_98	49.9	0.5131	2.661	0.030	0.2234	0.0014	0.28514	1317.0	8.3	1299.5	7.3	1349.0	11.0	1349.0	11.0	3.7
13WSUN_99	57.5	1.34	2.651	0.042	0.2215	0.0029	0.60088	1314.0	12.0	1290.0	15.0	1350.0	15.0	1350.0	15.0	4.4
13WSUN_100	314	0.904	3.370	0.052	0.2435	0.0043	0.85573	1496.0	12.0	1404.0	23.0	1623.0	11.0	1623.0	11.0	13.5
13WSUN_101	231	2.06	4.730	0.042	0.3166	0.0034	0.80477	1772.1	7.5	1773.0	17.0	1780.8	6.2	1780.8	6.2	0.4
13WSUN_102	58.8	1.02	13.810	0.140	0.5244	0.0048	0.76595	2735.7	9.4	2717.0	20.0	2743.3	6.9	2743.3	6.9	1.0
13WSUN_103	347	14.3	0.578	0.012	0.0729	0.0014	0.80472	462.9	8.0	453.3	8.6	523.0	29.0	453.3	8.6	2.1
13WSUN_103	65.2	0.904	2.023	0.035	0.1950	0.0022	0.27443	1125.0	11.0	1148.0	12.0	1074.0	18.0	1148.0	12.0	2.0
13WSUN_104	127	1.12	4.069	0.061	0.2909	0.0039	0.85398	1647.0	12.0	1645.0	19.0	1644.0	7.7	1644.0	7.7	0.1
13WSUN_105	99.9	1.93	4.658	0.050	0.3182	0.0031	0.79435	1759.0	9.1	1781.0	15.0	1728.2	7.0	1728.2	7.0	3.1
13WSUN_106	26.36	0.792	8.780	0.140	0.4103	0.0052	0.62832	2318.0	14.0	2216.0	24.0	2422.0	17.0	2422.0	17.0	8.5
13WSUN_107	185	0.929	0.568	0.009	0.0723	0.0008	0.32316	456.4	5.5	449.8	4.5	482.0	20.0	449.8	4.5	1.4

13WSUN_108	26.4	1.619	1.863	0.030	0.1807	0.0021	0.23432	1067.0	11.0	1071.0	11.0	1069.0	22.0	1071.0	11.0	0.4
13WSUN_109	156	1.016	5.086	0.055	0.3314	0.0040	0.8516	1833.1	9.2	1847.0	19.0	1811.2	7.4	1811.2	7.4	2.0
13WSUN_110	75.1	0.827	1.721	0.025	0.1695	0.0019	0.30837	1015.5	9.4	1009.0	10.0	1035.0	15.0	1009.0	10.0	0.6
13WSUN_111	237	0.2809	7.224	0.041	0.4047	0.0023	0.75713	2139.3	5.0	2190.0	11.0	2102.7	4.4	2102.7	4.4	4.2
13WSUN_112	126	2.613	2.040	0.021	0.1924	0.0018	0.63598	1129.3	6.9	1134.0	9.7	1117.0	11.0	1134.0	9.7	0.4
13WSUN_113	254	1.498	3.386	0.039	0.2633	0.0034	0.72272	1500.7	9.0	1506.0	17.0	1510.0	11.0	1510.0	11.0	0.3
13WSUN_114	156.4	0.6818	3.057	0.021	0.2497	0.0022	0.52284	1421.7	5.2	1438.0	11.0	1413.9	9.5	1413.9	9.5	1.7
13WSUN_115	0.478	0.204	7.320	0.520	0.1680	0.0120	0.23549	2132.0	66.0	994.0	68.0	3540.0	100.0	DISC	DISC	71.9
13WSUN_116	310	0.3741	0.287	0.004	0.0404	0.0004	0.31551	255.9	3.0	255.5	2.2	257.0	16.0	255.5	2.2	0.2
13WSUN_117	82.7	1.103	5.411	0.078	0.3462	0.0052	0.7148	1887.0	13.0	1919.0	26.0	1869.0	15.0	1869.0	15.0	2.7
13WSUN_118	146	1.839	3.684	0.055	0.2803	0.0043	0.9178	1568.0	12.0	1592.0	22.0	1536.2	7.8	1536.2	7.8	3.6
13WSUN_119	52.2	1.651	2.801	0.034	0.2330	0.0027	0.45822	1356.3	9.4	1350.0	14.0	1350.0	16.0	1350.0	16.0	0.0
13WSUN_120	262.4	2.14	2.377	0.015	0.2116	0.0012	0.61532	1235.5	4.6	1237.2	6.5	1222.3	6.9	1222.3	6.9	1.2
13WKEN_1	55.6	1.134	1.706	0.029	0.1705	0.0015	0.52321	1010.0	11.0	1014.8	8.3	994.0	21.0	1014.8	8.3	0.5
13WKEN_2	226.4	1.169	0.090	0.002	0.0134	0.0002	0.060331	87.2	1.7	85.5	1.1	168.0	29.0	85.5	1.1	1.9
13WKEN_3	244	1.307	0.366	0.003	0.0504	0.0004	0.25909	316.8	2.4	316.7	2.2	324.0	14.0	316.7	2.2	0.0
13WKEN_4	205.3	4.477	1.680	0.012	0.1672	0.0010	0.18678	1000.8	4.4	996.6	5.7	1003.1	9.5	996.6	5.7	0.4
13WKEN_5	174.9	1.323	6.188	0.073	0.3687	0.0025	0.76507	2002.0	10.0	2025.0	12.0	1982.0	11.0	1982.0	11.0	2.2
13WKEN_6	30.9	1.252	2.099	0.029	0.1940	0.0021	0.25303	1147.6	9.5	1143.0	11.0	1144.0	18.0	1143.0	11.0	0.4
13WKEN_7	83.7	0.949	4.156	0.046	0.2978	0.0041	0.52238	1665.1	9.1	1680.0	20.0	1663.0	11.0	1663.0	11.0	1.0
13WKEN_8	35.8	1.396	1.923	0.026	0.1862	0.0017	0.18177	1088.5	9.0	1100.8	9.2	1081.0	19.0	1100.8	9.2	1.1
13WKEN_9	53	0.967	3.154	0.057	0.2438	0.0052	0.76141	1445.0	14.0	1406.0	27.0	1504.0	27.0	1504.0	27.0	6.5
13WKEN_10	437.1	1.42	0.104	0.002	0.0159	0.0002	0.29305	100.7	1.5	101.7	1.0	112.0	19.0	101.7	1.0	1.0
13WKEN_11	142.2	0.38	0.341	0.006	0.0471	0.0006	0.10143	298.0	4.8	296.4	3.5	329.0	26.0	296.4	3.5	0.5
13WKEN_12	154	0.794	2.957	0.027	0.2453	0.0022	0.70038	1396.1	6.9	1414.0	11.0	1382.5	8.4	1382.5	8.4	2.3
13WKEN_13	152.4	0.781	0.572	0.012	0.0706	0.0007	0.1107	458.5	7.7	439.4	3.9	559.0	40.0	439.4	3.9	4.2
13WKEN_14	84.5	0.589	10.807	0.096	0.4734	0.0039	0.91104	2506.0	8.3	2498.0	17.0	2517.9	5.7	2517.9	5.7	0.8
13WKEN_15	52.2	1.597	4.878	0.043	0.3258	0.0034	0.42409	1799.2	7.1	1818.0	16.0	1782.0	13.0	1782.0	13.0	2.0
13WKEN_16	50.2	2.64	1.756	0.040	0.1668	0.0026	0.55862	1028.0	15.0	994.0	14.0	1129.0	20.0	994.0	14.0	3.3
13WKEN_17	162	3.057	1.946	0.013	0.1851	0.0013	0.38737	1096.8	4.5	1094.9	7.0	1100.5	9.6	1094.9	7.0	0.2
13WKEN_18	230	0.755	1.884	0.018	0.1835	0.0015	0.65873	1075.2	6.4	1087.2	8.1	1055.9	9.2	1087.2	8.1	1.1
13WKEN_19	20.2	0.676	1.638	0.058	0.1602	0.0023	0.0071524	975.0	17.0	959.0	12.0	1026.0	38.0	959.0	12.0	1.6
13WKEN_20	372	2.92	1.810	0.009	0.1770	0.0007	0.28604	1049.1	3.3	1050.4	4.0	1034.3	6.5	1050.4	4.0	0.1

13WKEN_21	148.2	1.087	0.699	0.008	0.0872	0.0006	0.067381	538.8	4.5	538.7	3.5	522.0	19.0	538.7	3.5	0.0
13WKEN_22	122.9	1.311	4.204	0.051	0.2944	0.0033	0.84074	1673.9	9.8	1663.0	17.0	1679.9	7.4	1679.9	7.4	1.0
13WKEN_23	216.2	1.005	0.164	0.004	0.0240	0.0003	0.2413	154.1	3.2	153.1	1.8	177.0	29.0	153.1	1.8	0.6
13WKEN_24	139.6	0.722	0.689	0.010	0.0852	0.0008	0.23742	532.0	5.8	526.8	4.4	551.0	19.0	526.8	4.4	1.0
13WKEN_25	79	2.23	3.221	0.037	0.2466	0.0023	0.55497	1461.7	8.9	1421.0	12.0	1518.0	13.0	1518.0	13.0	6.4
13WKEN_26	212	1.763	0.370	0.064	0.0146	0.0007	0.89749	313.0	48.0	93.3	4.4	2520.0	260.0	DISC	DISC	96.3
13WKEN_27	70.4	1.193	0.876	0.014	0.1033	0.0010	0.19371	638.2	7.4	633.5	5.9	660.0	24.0	633.5	5.9	0.7
13WKEN_28	162.9	2.416	4.456	0.026	0.3019	0.0020	0.6549	1723.2	4.9	1700.7	9.7	1753.5	6.0	1753.5	6.0	3.0
13WKEN_29	407	8.67	1.638	0.012	0.1649	0.0012	0.6455	984.6	4.6	983.9	6.7	983.0	5.6	983.9	6.7	0.1
13WKEN_30	215.6	1.438	4.269	0.027	0.3058	0.0020	0.63815	1687.8	5.2	1720.0	10.0	1653.8	5.8	1653.8	5.8	4.0
13WKEN_31	142	1.002	4.710	0.047	0.3124	0.0028	0.75264	1768.5	8.3	1752.0	14.0	1796.2	7.7	1796.2	7.7	2.5
13WKEN_32	173	1.694	2.969	0.019	0.2462	0.0017	0.39024	1399.4	4.8	1418.5	8.6	1381.8	8.5	1381.8	8.5	2.7
13WKEN_33	27.6	0.747	11.360	0.160	0.4771	0.0057	0.31822	2555.0	13.0	2514.0	25.0	2582.0	12.0	2582.0	12.0	2.6
13WKEN_34	61.4	1.33	2.928	0.028	0.2441	0.0016	0.39968	1390.7	7.5	1408.1	8.2	1378.0	10.0	1378.0	10.0	2.2
13WKEN_35	172	1.35	4.396	0.072	0.3043	0.0046	0.93081	1710.0	14.0	1715.0	23.0	1717.7	5.3	1717.7	5.3	0.2
13WKEN_36	164.2	1.017	0.484	0.011	0.0622	0.0011	0.75892	400.1	7.4	389.1	6.9	495.0	27.0	389.1	6.9	2.7
13WKEN_37	449	5.54	4.230	0.047	0.2566	0.0028	0.80359	1679.3	9.2	1472.0	14.0	1963.0	11.0	1963.0	11.0	25.0
13WKEN_38	61.4	0.893	2.193	0.023	0.2028	0.0017	0.23877	1178.2	7.4	1190.5	8.9	1178.0	10.0	1190.5	8.9	1.0
13WKEN_39	112.8	1.321	3.530	0.038	0.2712	0.0022	0.61525	1533.6	8.4	1547.0	11.0	1522.1	8.5	1522.1	8.5	1.6
13WKEN_40	100.2	1.106	0.122	0.004	0.0177	0.0004	0.031505	116.5	3.7	113.4	2.3	253.0	42.0	113.4	2.3	2.7
13WKEN_41	255	1.583	0.117	0.008	0.0148	0.0002	0.38161	111.7	6.9	94.6	1.4	550.0	110.0	94.6	1.4	15.3
13WKEN_42	124	10	0.452	0.017	0.0590	0.0023	0.44688	378.0	12.0	370.0	14.0	465.0	56.0	370.0	14.0	2.1
13WKEN_42	148	1.74	0.614	0.012	0.0799	0.0013	0.53248	485.9	7.4	495.8	7.5	460.0	21.0	495.8	7.5	2.0
13WKEN_43	200	1.92	2.184	0.023	0.2032	0.0019	0.78191	1176.6	7.7	1192.0	10.0	1158.8	9.2	1192.0	10.0	1.3
13WKEN_44	21.17	1.568	1.757	0.053	0.1747	0.0043	0.66249	1029.0	20.0	1037.0	24.0	1045.0	25.0	1037.0	24.0	0.8
13WKEN_45	16.1	1.055	1.599	0.052	0.1589	0.0040	0.54587	970.0	21.0	950.0	23.0	1003.0	34.0	950.0	23.0	2.1
13WKEN_46	142.1	0.821	0.908	0.009	0.1075	0.0006	0.22795	655.5	4.9	658.3	3.7	641.0	14.0	658.3	3.7	0.4
13WKEN_47	187.7	1.519	0.563	0.008	0.0726	0.0007	0.35036	453.1	4.9	451.5	4.0	467.0	20.0	451.5	4.0	0.4
13WKEN_48	130	1.0088	5.420	0.410	0.3035	0.0028	0.69485	1870.0	61.0	1708.0	14.0	2060.0	110.0	2060.0	110.0	17.1
13WKEN_49	107.7	1.879	4.365	0.035	0.3073	0.0022	0.68736	1706.4	6.4	1727.0	11.0	1678.9	7.6	1678.9	7.6	2.9
13WKEN_50	349	1.2	2.314	0.039	0.2055	0.0022	0.91757	1215.0	12.0	1205.0	12.0	1227.0	18.0	1227.0	18.0	1.8
13WKEN_51	103	0.766	1.586	0.095	0.0978	0.0015	0.70228	952.0	38.0	601.3	8.8	1892.0	90.0	DISC	DISC	68.2
13WKEN_52	726	1.08	0.343	0.008	0.0393	0.0011	0.64102	299.4	6.0	248.5	6.8	700.0	46.0	248.5	6.8	17.0
13WKEN_53	42.4	0.5967	1.749	0.041	0.1689	0.0023	0.29994	1026.0	15.0	1006.0	13.0	1086.0	27.0	1006.0	13.0	1.9
13WKEN_53	23.2	0.629	1.899	0.042	0.1850	0.0036	0.38095	1080.0	15.0	1094.0	20.0	1079.0	26.0	1094.0	20.0	1.3

13WKEN_54	127.6	1.386	2.291	0.019	0.2048	0.0016	0.47477	1210.1	6.0	1201.1	8.6	1224.0	11.0	1224.0	11.0	1.9
13WKEN_55	219	0.9183	2.844	0.020	0.2381	0.0017	0.60859	1366.9	5.3	1376.6	8.7	1355.0	6.8	1355.0	6.8	1.6
13WKEN_56	67.8	2.29	1.822	0.032	0.1808	0.0025	0.23753	1053.0	12.0	1071.0	14.0	1016.0	21.0	1071.0	14.0	1.7
13WKEN_57	40.2	0.94	0.749	0.018	0.0928	0.0010	0.16256	568.0	10.0	572.0	5.9	547.0	25.0	572.0	5.9	0.7
13WKEN_58	451.1	1.409	3.481	0.051	0.2285	0.0031	0.93007	1522.0	11.0	1327.0	16.0	1802.5	5.3	1802.5	5.3	26.4
13WKEN_59	55.6	0.894	2.838	0.038	0.2334	0.0031	0.71462	1366.0	10.0	1354.0	16.0	1393.0	11.0	1393.0	11.0	2.8
13WKEN_60	149	1.39	4.485	0.043	0.3057	0.0030	0.71704	1729.0	7.8	1719.0	15.0	1740.2	6.5	1740.2	6.5	1.2
13WKEN_61	371.6	1.208	0.120	0.004	0.0162	0.0002	0.17765	115.1	3.1	103.5	1.0	406.0	55.0	103.5	1.0	10.1
13WKEN_62	365	1.176	0.113	0.002	0.0165	0.0002	0.26483	109.1	1.8	105.6	1.1	201.0	25.0	105.6	1.1	3.2
13WKEN_63	83	1.093	2.022	0.032	0.1928	0.0023	0.56641	1122.0	11.0	1136.0	13.0	1117.0	17.0	1136.0	13.0	1.2
13WKEN_64	345	0.619	2.758	0.021	0.2308	0.0019	0.95329	1343.9	5.8	1339.0	10.0	1349.0	5.7	1349.0	5.7	0.7
13WKEN_65	235	0.606	0.112	0.003	0.0164	0.0002	0.037236	107.8	2.6	105.1	1.2	210.0	29.0	105.1	1.2	2.5
13WKEN_66	19.8	0.3325	3.098	0.049	0.2471	0.0030	0.32153	1434.0	12.0	1423.0	15.0	1433.0	17.0	1433.0	17.0	0.7
13WKEN_67	49.2	0.8248	1.697	0.020	0.1705	0.0015	0.22976	1006.9	7.5	1014.5	8.2	985.0	15.0	1014.5	8.2	0.8
13WKEN_68	29.28	0.649	5.377	0.068	0.3363	0.0041	0.5383	1880.0	11.0	1868.0	20.0	1885.0	13.0	1885.0	13.0	0.9
13WKEN_69	136.7	1.311	1.930	0.014	0.1862	0.0014	0.38694	1092.0	5.0	1100.4	7.5	1083.3	9.1	1100.4	7.5	0.8
13WKEN_70	257	3.71	0.782	0.020	0.0904	0.0014	0.77453	585.0	12.0	557.6	8.1	683.0	31.0	557.6	8.1	4.7
13WKEN_71	88.2	0.8	2.837	0.032	0.2324	0.0027	0.61332	1366.1	8.1	1348.0	14.0	1396.0	11.0	1396.0	11.0	3.4
13WKEN_72	132.1	0.985	1.935	0.016	0.1886	0.0014	0.6375	1093.0	5.4	1113.6	7.4	1058.7	8.2	1113.6	7.4	1.9
13WKEN_73	194.5	1.464	0.088	0.003	0.0128	0.0002	0.06063	85.3	2.4	81.7	1.2	231.0	34.0	81.7	1.2	4.2
13WKEN_74	33.91	0.675	5.312	0.061	0.3408	0.0033	0.5037	1870.0	9.8	1890.0	16.0	1843.0	11.0	1843.0	11.0	2.6
13WKEN_75	336	0.808	0.088	0.002	0.0133	0.0002	0.026174	85.1	1.9	85.3	1.1	178.0	31.0	85.3	1.1	0.2
13WKEN_76	119	1.75	2.210	0.019	0.2041	0.0014	0.56931	1183.8	6.0	1197.3	7.3	1159.9	8.8	1197.3	7.3	1.1
13WKEN_77	36.5	1.129	2.660	0.028	0.2307	0.0021	0.074818	1316.8	7.9	1338.0	11.0	1293.0	16.0	1293.0	16.0	3.5
13WKEN_78	516	1.098	0.084	0.002	0.0128	0.0002	0.28177	81.8	1.8	82.0	1.2	154.0	33.0	82.0	1.2	0.2
13WKEN_79	358	1.594	3.038	0.017	0.2499	0.0015	0.54851	1417.0	4.3	1437.7	7.5	1390.1	6.8	1390.1	6.8	3.4
13WKEN_80	214.8	2.044	4.309	0.026	0.2984	0.0021	0.69751	1694.9	5.0	1683.0	10.0	1716.5	6.0	1716.5	6.0	2.0
13WKEN_81	34.3	1.222	2.778	0.039	0.2373	0.0028	0.25028	1349.0	11.0	1372.0	14.0	1323.0	17.0	1323.0	17.0	3.7
13WKEN_82	162	1.58	5.126	0.041	0.3335	0.0031	0.78089	1840.0	6.9	1855.0	15.0	1836.2	6.6	1836.2	6.6	1.0
13WKEN_83	305.8	1.374	1.868	0.013	0.1827	0.0012	0.60238	1070.3	4.6	1081.4	6.4	1059.0	6.8	1081.4	6.4	1.0
13WKEN_84	161	1.9	3.624	0.032	0.2751	0.0021	0.74509	1554.3	7.1	1566.0	11.0	1548.3	5.7	1548.3	5.7	1.1
13WKEN_85	122.1	1.244	1.848	0.017	0.1822	0.0014	0.52506	1062.4	6.0	1079.1	7.5	1043.0	11.0	1079.1	7.5	1.6
13WKEN_86	68	0.669	1.686	0.019	0.1680	0.0016	0.45915	1003.7	7.2	1000.8	8.8	1032.0	15.0	1000.8	8.8	0.3
13WKEN_87	366	1.677	0.101	0.002	0.0154	0.0002	0.41427	97.7	2.0	98.4	1.1	162.0	22.0	98.4	1.1	0.7
13WKEN_88	80	1.521	1.765	0.021	0.1742	0.0014	0.43834	1032.2	7.5	1035.3	7.5	1018.0	12.0	1035.3	7.5	0.3

13WKEN_89	68.64	2.656	13.080	0.076	0.5191	0.0039	0.49988	2685.8	5.3	2695.0	17.0	2678.0	7.4	2678.0	7.4	0.6
13WKEN_90	78.5	2.988	4.653	0.042	0.3199	0.0031	0.73242	1758.3	7.4	1789.0	15.0	1721.4	9.0	1721.4	9.0	3.9
13WKEN_91	128.8	0.988	4.233	0.055	0.2973	0.0038	0.87718	1680.0	11.0	1678.0	19.0	1682.0	7.2	1682.0	7.2	0.2
13WKEN_92	81.8	0.4624	6.590	0.075	0.3697	0.0039	0.73085	2058.3	9.9	2027.0	18.0	2080.9	6.7	2080.9	6.7	2.6
13WKEN_93	62.4	1.191	4.716	0.037	0.3172	0.0025	0.37668	1769.7	6.7	1776.0	12.0	1766.4	9.6	1766.4	9.6	0.5
13WKEN_94	33.2	0.798	6.919	0.065	0.3947	0.0049	0.61764	2100.5	8.4	2144.0	23.0	2057.0	13.0	2057.0	13.0	4.2
13WKEN_95	96.6	1.732	0.895	0.025	0.0881	0.0012	0.1628	649.0	14.0	544.4	7.2	1034.0	68.0	544.4	7.2	16.1
13WKEN_96	107.7	0.811	0.758	0.012	0.0902	0.0012	0.63707	572.5	7.1	557.9	7.3	638.0	18.0	557.9	7.3	2.6
13WKEN_97	141.7	1.269	4.210	0.025	0.3061	0.0020	0.55993	1675.8	4.8	1721.4	9.9	1625.3	6.3	1625.3	6.3	5.9
13WKEN_98	390	2.15	2.352	0.011	0.2125	0.0011	0.47279	1228.6	3.4	1242.2	6.1	1210.4	6.1	1210.4	6.1	2.6
13WKEN_99	142.7	1.0266	4.296	0.036	0.2998	0.0031	0.71755	1692.1	6.9	1690.0	15.0	1697.3	7.3	1697.3	7.3	0.4
13WKEN_100	147.3	1.019	4.447	0.041	0.3046	0.0026	0.90635	1720.7	7.6	1714.0	13.0	1732.5	6.7	1732.5	6.7	1.1
13WKEN_101	132.6	1.058	2.784	0.030	0.2371	0.0018	0.25422	1350.7	7.9	1371.2	9.6	1324.0	9.7	1324.0	9.7	3.6
13WKEN_102	112.9	0.848	0.930	0.014	0.1106	0.0012	0.39335	668.0	7.4	676.4	7.1	638.0	16.0	676.4	7.1	1.3
13WKEN_103	142.9	1.291	0.088	0.003	0.0138	0.0002	0.22866	86.4	2.7	88.4	1.6	174.0	42.0	88.4	1.6	2.3
13WKEN_104	144.7	0.808	2.139	0.032	0.1918	0.0028	0.87554	1162.5	9.9	1131.0	15.0	1216.2	9.6	1131.0	15.0	2.7
13WKEN_105	211	1.124	0.246	0.005	0.0345	0.0004	0.034521	223.5	4.2	218.7	2.2	268.0	30.0	218.7	2.2	2.1
13WKEN_106	64.7	1.549	2.456	0.030	0.2194	0.0023	0.54242	1259.6	8.9	1278.0	12.0	1228.0	14.0	1228.0	14.0	4.1
13WKEN_107	51.1	0.6508	5.333	0.050	0.3455	0.0029	0.4046	1873.6	8.0	1913.0	14.0	1831.0	10.0	1831.0	10.0	4.5
13WKEN_108	162.5	1.854	2.485	0.027	0.2202	0.0022	0.82949	1267.1	8.0	1285.0	11.0	1232.0	11.0	1232.0	11.0	4.3
13WKEN_109	221	1.14	0.592	0.007	0.0769	0.0007	0.43559	472.0	4.3	477.5	4.1	444.0	16.0	477.5	4.1	1.2
13WKEN_110	340	1.133	0.105	0.002	0.0162	0.0002	0.23516	101.5	1.8	103.4	1.1	132.0	22.0	103.4	1.1	1.9
13WKEN_111	80.3	0.859	1.967	0.019	0.1865	0.0016	0.31947	1104.0	6.7	1102.3	8.7	1094.0	13.0	1102.3	8.7	0.2
13WKEN_112	436	1.239	0.207	0.007	0.0283	0.0003	0.30556	190.5	6.1	179.6	2.2	306.0	45.0	179.6	2.2	5.7
13WKEN_113	216.4	1.364	13.675	0.097	0.4460	0.0039	0.85574	2727.2	6.7	2377.0	17.0	2996.7	4.1	2996.7	4.1	20.7
13WKEN_114	66.1	0.669	0.931	0.013	0.1091	0.0011	0.1794	667.9	6.9	667.6	6.3	664.0	24.0	667.6	6.3	0.0
13WKEN_115	62.5	1.625	4.004	0.032	0.2866	0.0023	0.37402	1634.6	6.5	1624.0	12.0	1644.0	11.0	1644.0	11.0	1.2
13WKEN_116	179.6	2.138	2.164	0.014	0.1979	0.0014	0.54806	1170.0	4.7	1163.9	7.5	1163.4	6.1	1163.9	7.5	0.5
13WKEN_117	130.8	1.126	0.552	0.007	0.0726	0.0007	0.17612	446.3	4.2	451.8	4.3	427.0	19.0	451.8	4.3	1.2
13WKEN_118	166	2.111	4.454	0.040	0.3033	0.0030	0.73973	1722.0	7.4	1708.0	15.0	1740.9	7.3	1740.9	7.3	1.9
13WKEN_119	189.2	1.298	0.084	0.002	0.0129	0.0002	0.013973	81.9	2.2	82.4	1.1	211.0	30.0	82.4	1.1	0.6

Table 2b: Mount Garfield, CO

Sample Name:								207/235		206/238		206/207		Best age		
Grain #	[U] ppm	U/Th	207/235	2σ error	206/238	2σ error	RHO	Age Ma	2σ error	Age (Ma)	2σ error	Age (Ma)	2σ error	(Ma)	2σ error	% Discordance *
13GJR01_1	361	2.02	0.083	0.002	0.0124	0.0002	0.3403	80.1	1.9	79.3	1.0	165.0	31.0	79.3	1.0	1.0
13GJR01_2	154.9	0.498	0.514	0.007	0.0678	0.0007	0.2628	420.7	4.4	422.9	4.0	421.0	19.0	422.9	4.0	0.5
13GJR01_3	246	1.159	5.090	0.190	0.3188	0.0028	0.54712	1828.0	28.0	1785.0	13.0	1882.0	52.0	1882.0	52.0	5.2
13GJR01_4	1144	4.304	0.093	0.001	0.0140	0.0001	0.23787	90.1	1.1	89.8	0.7	118.0	15.0	89.8	0.7	0.4
13GJR01_5	313	0.596	1.978	0.064	0.1636	0.0053	0.96994	1109.0	22.0	981.0	30.0	1377.0	9.5	981.0	30.0	11.5
13GJR01_6	99.3	0.9643	4.485	0.040	0.3101	0.0027	0.49122	1727.9	7.3	1741.0	13.0	1707.0	11.0	1707.0	11.0	2.0
13GJR01_7	298	1.27	2.985	0.029	0.2444	0.0028	0.83204	1403.2	7.5	1409.0	14.0	1392.0	8.5	1392.0	8.5	1.2
13GJR01_8	267	1.158	0.073	0.002	0.0113	0.0002	0.036709	71.7	1.7	72.2	1.0	148.0	27.0	72.2	1.0	0.6
13GJR01_9	225	0.921	0.737	0.008	0.0901	0.0008	0.46416	560.6	4.7	556.2	4.9	577.0	11.0	556.2	4.9	0.8
13GJR01_10	234.2	2.98	3.541	0.063	0.2324	0.0049	0.6722	1536.0	14.0	1347.0	26.0	1810.0	25.0	1810.0	25.0	25.6
13GJR01_11	468.1	2.192	4.307	0.033	0.2856	0.0022	0.70364	1694.4	6.2	1619.0	11.0	1785.2	8.4	1785.2	8.4	9.3
13GJR01_12	31.21	0.587	0.706	0.022	0.0837	0.0017	0.32063	543.0	13.0	518.0	10.0	678.0	47.0	518.0	10.0	4.6
13GJR01_13	87.4	1.699	1.887	0.025	0.1833	0.0019	0.67091	1078.1	9.0	1085.0	10.0	1059.0	12.0	1085.0	10.0	0.6
13GJR01_14	264	1.406	0.103	0.002	0.0150	0.0002	0.24527	99.2	1.9	95.9	1.3	206.0	28.0	95.9	1.3	3.3
13GJR01_15	251	1.332	0.078	0.002	0.0118	0.0002	0.15366	75.9	1.8	75.9	1.0	173.0	32.0	75.9	1.0	0.0
13GJR01_16	820	1.66	0.096	0.002	0.0146	0.0002	0.06535	93.4	1.8	93.6	1.5	128.0	20.0	93.6	1.5	0.2
13GJR01_17	31.6	0.4911	11.980	0.140	0.5105	0.0052	0.63551	2602.0	11.0	2658.0	22.0	2558.0	11.0	2558.0	11.0	3.9
13GJR01_18	45.6	0.6772	0.735	0.014	0.0891	0.0011	0.14452	558.7	8.1	550.0	6.2	600.0	26.0	550.0	6.2	1.6
13GJR01_19	57.4	0.917	1.903	0.030	0.1811	0.0026	0.64804	1081.0	10.0	1073.0	14.0	1123.0	15.0	1073.0	14.0	0.7
13GJR01_20	83.2	6.6	1.614	0.020	0.1627	0.0015	0.41925	975.1	7.7	971.8	8.4	1002.0	17.0	971.8	8.4	0.3
13GJR01_21	62.8	2.452	3.798	0.038	0.2797	0.0020	0.38639	1593.1	8.3	1592.0	10.0	1594.0	13.0	1594.0	13.0	0.1
13GJR01_22	311	1.691	0.110	0.003	0.0167	0.0002	0.19551	105.9	2.3	107.0	1.5	150.0	25.0	107.0	1.5	1.0
13GJR01_23	289	2.02	0.080	0.002	0.0121	0.0002	0.22285	78.2	2.1	77.2	1.0	185.0	31.0	77.2	1.0	1.3
13GJR01_24	141	2.77	0.877	0.017	0.1042	0.0018	0.75612	638.7	9.1	639.0	10.0	629.0	20.0	639.0	10.0	0.0
13GJR01_25	109	1.19	8.580	0.140	0.4060	0.0050	0.77644	2294.0	15.0	2196.0	23.0	2371.0	17.0	2371.0	17.0	7.4
13GJR01_26	216	1.98	1.709	0.069	0.1375	0.0057	0.83391	1010.0	26.0	830.0	33.0	1472.0	17.0	830.0	33.0	17.8
13GJR01_26	231.4	0.91	2.890	0.130	0.2220	0.0100	0.97009	1383.0	37.0	1290.0	53.0	1555.0	18.0	1555.0	18.0	17.0
13GJR01_27	321.3	1.761	0.084	0.004	0.0127	0.0004	0.60093	82.0	3.8	81.5	2.5	154.0	50.0	81.5	2.5	0.6

13GJR01_28	236	1.431	0.092	0.002	0.0139	0.0002	0.037697	89.6	2.1	89.3	1.5	149.0	25.0	89.3	1.5	0.3
13GJR01_29	78.6	0.811	0.099	0.004	0.0144	0.0003	0.052974	96.1	3.6	92.4	1.9	269.0	51.0	92.4	1.9	3.9
13GJR01_30	77.9	2.286	4.933	0.038	0.3331	0.0023	0.50778	1807.6	6.5	1853.0	11.0	1766.9	7.8	1766.9	7.8	4.9
13GJR01_31	128.8	0.574	12.690	0.140	0.5151	0.0048	0.81361	2657.0	10.0	2680.0	20.0	2649.1	5.4	2649.1	5.4	1.2
13GJR01_32	127.4	2.641	4.581	0.044	0.3113	0.0029	0.67995	1745.2	8.0	1747.0	14.0	1748.3	7.4	1748.3	7.4	0.1
13GJR01_33	47.1	1.634	0.880	0.016	0.1056	0.0015	0.31221	641.6	8.7	647.1	8.6	622.0	27.0	647.1	8.6	0.9
13GJR01_34	242	0.819	0.510	0.006	0.0664	0.0006	0.39859	418.4	4.3	414.1	3.5	445.0	16.0	414.1	3.5	1.0
13GJR01_35	236.5	1.316	6.257	0.039	0.3672	0.0025	0.63827	2012.2	5.4	2016.0	12.0	2010.8	6.0	2010.8	6.0	0.3
13GJR01_36	135.5	1.953	4.704	0.038	0.3132	0.0028	0.63688	1767.5	6.7	1756.0	14.0	1776.7	7.9	1776.7	7.9	1.2
13GJR01_37	157.2	2.37	1.770	0.020	0.1749	0.0017	0.53064	1036.1	7.5	1038.9	9.4	1024.0	15.0	1038.9	9.4	0.3
13GJR01_38	184.5	2.96	2.323	0.036	0.2029	0.0022	0.82949	1218.0	11.0	1191.0	12.0	1265.0	13.0	1191.0	12.0	2.2
13GJR01_39	394	0.68	3.724	0.052	0.2683	0.0032	0.86585	1577.0	11.0	1532.0	16.0	1641.7	9.2	1641.7	9.2	6.7
13GJR01_40	240	7.7	0.537	0.005	0.0698	0.0006	0.11809	436.6	3.6	434.7	3.4	436.0	16.0	434.7	3.4	0.4
13GJR01_41	202	3.51	0.083	0.003	0.0125	0.0002	0.086082	80.5	2.5	80.3	1.2	209.0	48.0	80.3	1.2	0.2
13GJR01_42	212	1.192	0.099	0.003	0.0154	0.0002	0.063198	96.1	2.5	98.4	1.4	140.0	30.0	98.4	1.4	2.4
13GJR01_43	150.3	1.292	15.840	0.110	0.5769	0.0038	0.54493	2867.8	6.3	2936.0	15.0	2818.3	7.4	2818.3	7.4	4.2
13GJR01_44	116	0.778	3.184	0.053	0.2351	0.0035	0.54744	1453.0	13.0	1361.0	18.0	1598.0	17.0	1598.0	17.0	14.8
13GJR01_44	82.2	0.45	4.087	0.042	0.2951	0.0045	0.50869	1651.4	8.4	1667.0	22.0	1632.0	15.0	1632.0	15.0	2.1
13GJR01_45	1129	1.022	4.280	0.017	0.2990	0.0017	0.57282	1689.4	3.3	1686.3	8.5	1698.4	4.6	1698.4	4.6	0.7
13GJR01_46	106.6	1.707	2.869	0.027	0.2328	0.0021	0.58873	1373.3	7.1	1349.0	11.0	1405.0	9.7	1405.0	9.7	4.0
13GJR01_47	32.3	0.499	3.295	0.036	0.2567	0.0030	0.16182	1479.2	8.5	1473.0	16.0	1491.0	18.0	1491.0	18.0	1.2
13GJR01_48	88.7	2.24	0.555	0.014	0.0714	0.0014	0.74183	447.8	9.3	444.2	8.6	475.0	24.0	444.2	8.6	0.8
13GJR01_49	137.6	1.725	0.115	0.003	0.0152	0.0003	0.11406	110.8	3.1	97.5	1.8	404.0	47.0	97.5	1.8	12.0
13GJR01_50	747	2.377	0.101	0.002	0.0153	0.0002	0.49615	98.0	1.5	97.7	1.5	146.0	21.0	97.7	1.5	0.3
13GJR01_51	1003	1.985	0.160	0.002	0.0237	0.0002	0.56183	150.3	1.4	150.7	1.4	146.0	12.0	150.7	1.4	0.3
13GJR01_52	120.8	2.42	4.586	0.041	0.3145	0.0032	0.61721	1746.4	7.5	1763.0	16.0	1724.0	8.7	1724.0	8.7	2.3
13GJR01_53	246	1.129	0.105	0.003	0.0156	0.0003	0.30131	101.4	2.9	99.8	1.6	167.0	31.0	99.8	1.6	1.6
13GJR01_54	81.6	2.04	1.577	0.022	0.1640	0.0017	0.2628	960.6	8.6	978.8	9.3	917.0	18.0	978.8	9.3	1.9
13GJR01_55	98.8	1.353	0.094	0.003	0.0126	0.0003	0.20681	90.9	3.0	80.9	1.6	402.0	41.0	80.9	1.6	11.0
13GJR01_56	278.6	1.37	0.078	0.002	0.0119	0.0002	0.056267	76.2	1.7	76.3	1.1	149.0	29.0	76.3	1.1	0.1
13GJR01_57	136	3.463	4.999	0.037	0.3305	0.0024	0.69988	1818.8	6.2	1841.0	12.0	1792.1	5.8	1792.1	5.8	2.7
13GJR01_58	584	3.38	0.101	0.002	0.0153	0.0002	0.13005	97.2	1.4	98.1	1.0	114.0	17.0	98.1	1.0	1.0
13GJR01_59	132	1.462	2.143	0.017	0.2027	0.0016	0.14444	1162.4	5.6	1189.8	8.4	1119.0	13.0	1189.8	8.4	2.4
13GJR01_60	248	1.055	1.998	0.014	0.1928	0.0014	0.48086	1115.2	4.8	1136.5	7.3	1086.0	7.8	1136.5	7.3	1.9
13GJR01_61	97.2	1.3	9.770	0.180	0.4004	0.0057	0.86221	2413.0	17.0	2170.0	26.0	2631.0	13.0	2631.0	13.0	17.5

13GJR01_62	153.1	1.495	2.754	0.024	0.2294	0.0016	0.46478	1342.9	6.5	1331.5	8.3	1370.0	10.0	1370.0	10.0	2.8
13GJR01_63	216	1.195	0.099	0.003	0.0148	0.0003	0.36912	95.7	2.5	94.9	1.7	170.0	25.0	94.9	1.7	0.8
13GJR01_64	103.9	0.826	0.092	0.004	0.0122	0.0003	0.34619	89.1	3.7	78.3	2.1	416.0	54.0	78.3	2.1	12.1
13GJR01_65	294	1.81	0.080	0.002	0.0123	0.0002	0.18304	78.9	1.7	78.9	1.2	158.0	27.0	78.9	1.2	0.0
13GJR01_66	137.2	1.42	3.977	0.079	0.2788	0.0055	0.75904	1632.0	17.0	1585.0	27.0	1696.0	12.0	1696.0	12.0	6.5
13GJR01_67	467	2.216	0.095	0.002	0.0143	0.0001	0.075494	91.9	1.5	91.2	0.9	129.0	20.0	91.2	0.9	0.8
13GJR01_68	264.6	1.236	0.107	0.002	0.0153	0.0002	0.13206	103.1	2.0	98.1	1.0	235.0	33.0	98.1	1.0	4.8
13GJR01_69	234	0.582	0.384	0.006	0.0521	0.0004	0.30649	329.5	4.4	327.3	2.4	336.0	20.0	327.3	2.4	0.7
13GJR01_70	131	1.193	4.334	0.032	0.2992	0.0028	0.65439	1700.5	6.0	1687.0	14.0	1700.9	7.0	1700.9	7.0	0.8
13GJR01_71	349	1.87	14.250	0.130	0.5409	0.0057	0.75673	2767.0	8.6	2786.0	24.0	2734.8	7.1	2734.8	7.1	1.9
13GJR01_72	186	1.319	0.109	0.006	0.0149	0.0003	0.044592	104.6	5.3	95.5	2.0	390.0	79.0	95.5	2.0	8.7
13GJR01_73	74.4	1.128	0.085	0.004	0.0122	0.0005	0.048801	82.5	3.8	78.4	3.2	238.0	64.0	78.4	3.2	5.0
13GJR01_74	264	0.851	1.910	0.023	0.1831	0.0025	0.77682	1083.9	8.1	1084.0	14.0	1084.0	12.0	1084.0	14.0	0.0
13GJR01_75	539	1.174	2.368	0.015	0.2123	0.0014	0.55839	1232.9	4.6	1242.1	7.3	1216.1	6.2	1216.1	6.2	2.1
13GJR01_76	322	1.39	0.107	0.002	0.0161	0.0002	0.086499	103.1	2.1	102.6	1.1	164.0	27.0	102.6	1.1	0.5
13GJR01_77	5.89	0.5618	1.956	0.070	0.1876	0.0039	0.46667	1101.0	24.0	1111.0	22.0	1089.0	37.0	1111.0	22.0	0.9
13GJR01_78	249.3	1.353	2.150	0.018	0.1990	0.0018	0.52445	1164.8	5.7	1169.6	9.6	1158.0	13.0	1169.6	9.6	0.4
13GJR01_79	380	2.709	5.233	0.052	0.3398	0.0043	0.82699	1857.4	8.4	1888.0	20.0	1832.9	9.8	1832.9	9.8	3.0
13GJR01_80	47.6	1.225	1.655	0.026	0.1656	0.0024	0.72353	990.5	9.9	988.0	14.0	997.0	13.0	988.0	14.0	0.3
13GJR01_81	95	0.675	0.217	0.054	0.0131	0.0005	0.89738	177.0	35.0	83.6	3.2	1340.0	240.0	DISC	DISC	93.8
13GJR01_82	386	2.94	1.786	0.010	0.1771	0.0011	0.37924	1040.3	3.6	1051.3	5.8	1018.9	7.3	1051.3	5.8	1.1
13GJR01_83	194.8	2.287	3.873	0.068	0.2562	0.0036	0.7396	1608.0	14.0	1470.0	19.0	1793.0	11.0	1793.0	11.0	18.0
13GJR01_83	71	2.176	4.730	0.130	0.3180	0.0070	0.87941	1770.0	22.0	1779.0	34.0	1764.0	16.0	1764.0	16.0	0.9
13GJR01_84	56.4	0.897	0.895	0.016	0.1043	0.0011	0.15521	649.4	8.4	639.3	6.6	673.0	24.0	639.3	6.6	1.6
13GJR01_85	185	1.83	4.441	0.063	0.3067	0.0047	0.86173	1719.0	12.0	1724.0	23.0	1707.9	8.6	1707.9	8.6	0.9
13GJR01_86	340	1.278	0.107	0.003	0.0151	0.0002	0.019665	103.3	2.6	96.7	1.2	256.0	35.0	96.7	1.2	6.4
13GJR01_87	102.2	1.978	4.142	0.035	0.2971	0.0029	0.82148	1662.2	6.9	1676.0	14.0	1638.2	8.4	1638.2	8.4	2.3
13GJR01_88	287	1.074	0.080	0.002	0.0120	0.0002	0.36121	78.1	2.0	77.1	1.0	151.0	28.0	77.1	1.0	1.3
13GJR01_89	231.6	4.19	0.079	0.002	0.0120	0.0002	0.085737	77.2	1.7	77.0	1.0	177.0	27.0	77.0	1.0	0.3
13GJR01_90	207	1.253	0.842	0.009	0.1006	0.0010	0.63791	619.8	4.7	617.9	5.6	607.0	10.0	617.9	5.6	0.3
13GJR01_91	523	1.333	2.821	0.078	0.2301	0.0066	0.91162	1361.0	21.0	1339.0	34.0	1410.0	12.0	1410.0	12.0	5.0
13GJR01_92	186.6	1.491	0.941	0.010	0.1094	0.0009	0.46049	673.7	5.2	669.3	5.4	670.0	13.0	669.3	5.4	0.7
13GJR01_93	167	2.656	4.565	0.035	0.3162	0.0027	0.72961	1742.6	6.4	1771.0	13.0	1705.1	6.0	1705.1	6.0	3.9
13GJR01_94	96.5	1.183	0.540	0.010	0.0692	0.0009	0.21711	438.3	6.9	431.1	5.2	473.0	26.0	431.1	5.2	1.6
13GJR01_95	1362	3.2	0.086	0.001	0.0131	0.0001	0.3092	83.3	0.9	84.1	0.8	96.0	12.0	84.1	0.8	0.9

13GJR01_96	573	5.68	4.411	0.031	0.3050	0.0023	0.80771	1714.1	5.9	1717.0	11.0	1712.1	5.1	1712.1	5.1	0.3
13GJR01_97	73.32	1.771	6.614	0.048	0.3730	0.0028	0.31728	2060.9	6.3	2043.0	13.0	2078.0	11.0	2078.0	11.0	1.7
13GJR01_98	30.3	0.882	2.660	0.033	0.2280	0.0028	0.41592	1318.9	9.3	1323.0	15.0	1330.0	14.0	1330.0	14.0	0.5
13GJR01_99	117	2.274	4.800	0.028	0.3304	0.0022	0.53407	1785.4	5.1	1840.0	11.0	1734.0	6.7	1734.0	6.7	6.1
13GJR01_100	297	3.464	4.816	0.031	0.3242	0.0025	0.7377	1787.4	5.5	1810.0	12.0	1761.5	5.0	1761.5	5.0	2.8
13GJR01_101	75.6	1.04	12.252	0.075	0.5195	0.0049	0.44966	2625.1	5.5	2696.0	21.0	2578.3	8.6	2578.3	8.6	4.6
13GJR01_102	155.2	2.05	3.312	0.027	0.2628	0.0022	0.59705	1483.5	6.3	1505.0	11.0	1461.6	6.7	1461.6	6.7	3.0
13GJR01_103	182.7	1.903	4.404	0.040	0.2996	0.0032	0.8433	1712.6	7.5	1689.0	16.0	1747.4	5.8	1747.4	5.8	3.3
13GJR01_104	621	1.98	0.081	0.002	0.0122	0.0002	0.1371	79.2	1.9	78.4	1.2	133.0	50.0	78.4	1.2	1.0
13GJR01_105	225.9	0.856	0.837	0.008	0.1013	0.0009	0.27583	617.3	4.7	621.8	5.1	591.0	16.0	621.8	5.1	0.7
13GJR01_106	133	1.36	3.412	0.025	0.2690	0.0021	0.52543	1506.8	5.8	1535.0	11.0	1466.0	8.7	1466.0	8.7	4.7
13GJR01_107	252	1.447	0.105	0.002	0.0157	0.0002	0.0087939	101.7	2.2	100.5	1.0	186.0	31.0	100.5	1.0	1.2
13GJR01_108	360	1.577	0.101	0.002	0.0150	0.0002	0.36022	97.7	1.4	95.8	1.4	131.0	20.0	95.8	1.4	1.9
13GJR01_109	135.4	1.985	0.787	0.011	0.0957	0.0007	0.061626	588.9	6.0	589.3	4.2	580.0	18.0	589.3	4.2	0.1
13GJR01_110	234	1.222	5.286	0.055	0.3384	0.0031	0.76959	1865.8	8.8	1878.0	15.0	1851.6	7.7	1851.6	7.7	1.4
13GJR01_111	222	1.422	6.780	0.150	0.3163	0.0030	0.81283	2080.0	20.0	1771.0	15.0	2392.0	27.0	2392.0	27.0	26.0
13GJR01_112	107.6	0.846	1.883	0.021	0.1831	0.0016	0.30494	1075.4	7.3	1083.9	8.6	1058.0	13.0	1083.9	8.6	0.8
13GJR01_113	47.8	1.004	4.161	0.051	0.2945	0.0034	0.65042	1665.0	10.0	1664.0	17.0	1668.0	12.0	1668.0	12.0	0.2
13GJR01_114	256.4	2.808	4.655	0.072	0.3110	0.0053	0.76426	1761.0	13.0	1745.0	26.0	1772.9	9.2	1772.9	9.2	1.6
13GJR01_115	29.95	0.3191	13.500	0.180	0.5262	0.0067	0.63529	2715.0	12.0	2725.0	28.0	2703.0	13.0	2703.0	13.0	0.8
13GJR01_116	586	1.304	0.104	0.002	0.0156	0.0002	0.44679	100.0	1.4	100.0	1.2	126.0	17.0	100.0	1.2	0.0
13GJR01_117	1270	5.71	0.142	0.005	0.0205	0.0007	0.94889	134.5	4.3	131.1	4.4	193.0	16.0	131.1	4.4	2.5
13GJR01_118	38.2	0.932	10.500	0.120	0.4594	0.0061	0.75818	2479.0	11.0	2436.0	27.0	2507.0	10.0	2507.0	10.0	2.8
13GJR01_119	171	0.913	6.794	0.069	0.3816	0.0037	0.57924	2084.2	8.9	2083.0	17.0	2078.5	8.6	2078.5	8.6	0.2
13GJR01_120	131	1.552	0.126	0.003	0.0189	0.0003	0.16699	120.6	3.0	120.9	2.0	193.0	32.0	120.9	2.0	0.2
GJCOCE01_1	57.2	1.116	2.145	0.030	0.1990	0.0022	0.88036	1163.9	9.6	1170.0	12.0	1155.0	14.0	1170.0	12.0	0.5
GJCOCE01_2	17.96	0.776	2.009	0.081	0.1778	0.0030	0.94793	1112.0	26.0	1055.0	16.0	1226.0	58.0	1055.0	16.0	5.1
GJCOCE01_3	250	8.3	0.639	0.016	0.0759	0.0020	0.93699	501.0	10.0	471.0	12.0	610.0	25.0	471.0	12.0	6.0
GJCOCE01_5	153.5	1.206	0.122	0.004	0.0186	0.0003	0.87551	117.0	3.2	118.8	2.0	178.0	30.0	118.8	2.0	1.5
GJCOCE01_6	199.6	2.356	5.099	0.033	0.3348	0.0022	0.78947	1835.6	5.5	1862.0	11.0	1802.5	5.6	1802.5	5.6	3.3
GJCOCE01_7	96.5	0.651	0.083	0.004	0.0123	0.0002	0.9518	81.1	3.8	78.5	1.3	304.0	63.0	78.5	1.3	3.2
GJCOCE01_8	76.9	1.55	4.070	0.270	0.1914	0.0088	0.99756	1639.0	59.0	1128.0	48.0	2376.0	51.0	DISC	DISC	31.2
GJCOCE01_8	21.14	0.542	11.850	0.290	0.4720	0.0110	0.9841	2594.0	22.0	2499.0	45.0	2658.0	15.0	2658.0	15.0	6.0

GJCOCE01_9	221.7	1.672	2.681	0.024	0.2252	0.0017	0.5452	1324.2	6.4	1309.1	8.7	1341.0	10.0	1341.0	10.0	2.4
GJCOCE01_10	145.4	1.202	12.776	0.086	0.5063	0.0039	0.91509	2663.0	6.3	2640.0	17.0	2677.0	8.1	2677.0	8.1	1.4
GJCOCE01_11	206.1	0.7202	14.016	0.093	0.5319	0.0040	0.68152	2750.6	6.3	2753.0	18.0	2738.7	7.7	2738.7	7.7	0.5
GJCOCE01_12	52.8	1.14	0.598	0.012	0.0763	0.0011	0.88217	476.2	7.8	473.7	6.7	489.0	27.0	473.7	6.7	0.5
GJCOCE01_13	82.19	0.863	6.586	0.048	0.3824	0.0032	0.88669	2057.1	6.4	2089.0	15.0	2015.2	8.5	2015.2	8.5	3.7
GJCOCE01_14	107.8	1.077	5.102	0.039	0.3351	0.0024	0.87493	1836.1	6.4	1863.0	11.0	1800.1	8.3	1800.1	8.3	3.5
GJCOCE01_15	358	0.903	0.118	0.004	0.0154	0.0002	0.85691	113.2	3.8	98.2	1.3	535.0	77.0	98.2	1.3	13.3
GJCOCE01_16	277	1.47	0.087	0.003	0.0121	0.0002	0.90663	84.9	2.7	77.8	1.2	319.0	49.0	77.8	1.2	8.4
GJCOCE01_17	1163	3.121	3.248	0.025	0.2291	0.0020	0.99935	1468.5	6.1	1330.0	10.0	1675.7	6.9	1675.7	6.9	20.6
GJCOCE01_18	610	3.8	0.070	0.002	0.0102	0.0001	0.83576	69.0	1.9	65.5	1.8	161.0	43.0	65.5	1.8	5.1
GJCOCE01_19	86	1.084	0.090	0.005	0.0132	0.0005	0.97324	87.0	4.9	84.8	3.5	347.0	82.0	84.8	3.5	2.5
GJCOCE01_20	249	1.196	0.117	0.003	0.0156	0.0002	0.8629	111.9	3.1	99.7	1.2	401.0	48.0	99.7	1.2	10.9
GJCOCE01_21	53.9	0.9113	0.906	0.016	0.1066	0.0010	0.80728	656.8	8.5	653.0	6.0	662.0	24.0	653.0	6.0	0.6
GJCOCE01_22	161	0.764	0.762	0.010	0.0879	0.0014	0.9109	575.1	5.6	543.1	8.5	687.0	29.0	543.1	8.5	5.6
GJCOCE01_23	1147	2.086	0.103	0.001	0.0154	0.0002	0.72279	99.8	1.2	98.5	1.0	128.0	16.0	98.5	1.0	1.3
GJCOCE01_24	76.6	0.976	4.213	0.039	0.2998	0.0027	0.91384	1676.0	7.6	1690.0	13.0	1647.0	10.0	1647.0	10.0	2.6
GJCOCE01_25	170.4	1.703	2.211	0.019	0.2011	0.0013	0.67045	1184.2	5.8	1181.2	7.2	1184.6	9.0	1181.2	7.2	0.3
GJCOCE01_26	59.4	1.002	0.078	0.005	0.0122	0.0003	0.97561	76.1	4.5	78.0	1.9	306.0	60.0	78.0	1.9	2.5
GJCOCE01_27	485	1.378	3.240	0.026	0.2553	0.0026	0.83316	1466.6	6.2	1465.0	13.0	1467.5	7.0	1467.5	7.0	0.2
GJCOCE01_28	463	1.015	0.132	0.007	0.0157	0.0002	0.92097	124.3	5.4	100.3	1.2	597.0	79.0	100.3	1.2	19.3
GJCOCE01_29	34.97	0.997	2.013	0.060	0.1877	0.0045	0.97898	1119.0	20.0	1109.0	24.0	1156.0	39.0	1109.0	24.0	0.9
GJCOCE01_30	12.52	1.503	13.960	0.260	0.5286	0.0072	0.97354	2746.0	18.0	2739.0	31.0	2767.0	18.0	2767.0	18.0	1.0
GJCOCE01_31	98.5	1.527	4.966	0.031	0.3292	0.0023	0.80598	1813.3	5.2	1834.0	11.0	1783.3	6.7	1783.3	6.7	2.8
GJCOCE01_32	384	0.847	3.763	0.042	0.2664	0.0031	0.9512	1584.5	9.0	1522.0	16.0	1684.0	14.0	1684.0	14.0	9.6
GJCOCE01_33	71.9	1.94	3.832	0.046	0.2723	0.0034	0.95882	1598.9	9.8	1552.0	17.0	1651.0	14.0	1651.0	14.0	6.0
GJCOCE01_34	179.8	0.986	0.111	0.003	0.0158	0.0002	0.89483	107.0	3.1	101.2	1.5	289.0	36.0	101.2	1.5	5.4
GJCOCE01_35	125.9	1.19	6.070	0.052	0.3588	0.0030	0.9022	1986.5	7.8	1976.0	14.0	1994.3	7.8	1994.3	7.8	0.9
GJCOCE01_36	113.3	0.828	3.961	0.031	0.2824	0.0025	0.87003	1626.6	6.5	1603.0	13.0	1653.0	11.0	1653.0	11.0	3.0
GJCOCE01_37	148.6	1.337	5.564	0.049	0.3471	0.0033	0.89195	1910.1	7.6	1920.0	16.0	1904.8	7.7	1904.8	7.7	0.8
GJCOCE01_38	595	0.75	0.103	0.002	0.0148	0.0002	0.74087	99.6	2.2	95.0	1.2	208.0	27.0	95.0	1.2	4.6
GJCOCE01_39	394	3.79	0.100	0.003	0.0150	0.0003	0.85522	96.8	2.7	95.9	1.6	177.0	25.0	95.9	1.6	0.9
GJCOCE01_40	215	1.518	0.115	0.004	0.0164	0.0003	0.90343	110.5	3.6	104.6	2.0	315.0	59.0	104.6	2.0	5.3
GJCOCE01_41	56.1	1.346	3.531	0.038	0.2749	0.0027	0.91045	1535.8	8.6	1567.0	13.0	1498.0	13.0	1498.0	13.0	4.6
GJCOCE01_42	75.4	0.9733	5.474	0.037	0.3548	0.0028	0.9288	1896.1	5.8	1957.0	13.0	1835.5	8.3	1835.5	8.3	6.6
GJCOCE01_43	109.8	0.895	0.729	0.009	0.0898	0.0010	0.58613	555.6	5.0	554.1	5.6	587.0	22.0	554.1	5.6	0.3

GJCOCE01_44	354	1.569	9.060	0.270	0.3710	0.0100	0.98045	2341.0	29.0	2032.0	50.0	2630.5	6.5	2630.5	6.5	22.8
GJCOCE01_44	114.2	1.226	13.100	0.150	0.5294	0.0059	0.94914	2686.0	11.0	2738.0	25.0	2658.5	5.8	2658.5	5.8	3.0
GJCOCE01_45	191	1.613	0.082	0.003	0.0124	0.0002	0.8954	80.3	2.3	79.6	1.3	190.0	30.0	79.6	1.3	0.9
GJCOCE01_46	96.7	1.53	2.395	0.032	0.2192	0.0030	0.9496	1240.4	9.6	1277.0	16.0	1169.0	13.0	1169.0	16.0	3.0
GJCOCE01_47	86.1	0.292	0.570	0.008	0.0746	0.0008	0.83948	458.4	5.3	464.0	4.7	415.0	26.0	464.0	4.7	1.2
GJCOCE01_48	628	0.719	0.114	0.003	0.0158	0.0002	0.85773	109.4	2.5	100.8	1.1	311.0	41.0	100.8	1.1	7.9
GJCOCE01_49	144.7	1.311	4.363	0.043	0.2862	0.0030	0.94696	1705.1	8.2	1622.0	15.0	1802.0	12.0	1802.0	12.0	10.0
GJCOCE01_50	539	0.969	0.116	0.009	0.0155	0.0002	0.70058	109.1	6.8	99.1	1.2	267.0	87.0	99.1	1.2	9.2
GJCOCE01_51	223.6	2.68	4.933	0.040	0.3278	0.0032	0.89521	1809.7	7.2	1828.0	16.0	1783.5	6.4	1783.5	6.4	2.5
GJCOCE01_52	105.7	0.9969	4.726	0.053	0.3200	0.0037	0.88351	1771.0	9.5	1789.0	18.0	1757.5	8.3	1757.5	8.3	1.8
GJCOCE01_53	141.6	1.191	0.078	0.002	0.0120	0.0002	0.87154	76.3	2.3	77.0	1.2	204.0	34.0	77.0	1.2	0.9
GJCOCE01_54	184.4	0.954	0.102	0.003	0.0150	0.0002	0.90396	98.1	3.1	96.2	1.3	229.0	39.0	96.2	1.3	1.9
GJCOCE01_55	149.9	1.611	0.594	0.007	0.0741	0.0007	0.65199	473.2	4.6	460.8	4.3	537.0	15.0	460.8	4.3	2.6
GJCOCE01_56	39.79	0.6033	6.612	0.069	0.3763	0.0043	0.93086	2061.2	9.1	2058.0	20.0	2077.4	9.9	2077.4	9.9	0.9
GJCOCE01_57	28	0.363	1.629	0.029	0.1597	0.0021	0.8753	981.0	11.0	955.0	12.0	1050.0	22.0	955.0	12.0	2.7
GJCOCE01_58	239	2.146	0.082	0.002	0.0126	0.0002	0.8403	80.2	1.7	81.0	1.2	174.0	34.0	81.0	1.2	1.0
GJCOCE01_59	68.9	1.217	2.952	0.037	0.2454	0.0018	0.72787	1394.4	9.5	1414.6	9.1	1376.0	16.0	1376.0	16.0	2.8
GJCOCE01_60	165.4	1.131	0.095	0.003	0.0139	0.0003	0.92056	92.4	2.7	89.2	1.6	275.0	44.0	89.2	1.6	3.5
GJCOCE01_61	85.9	1.007	1.917	0.023	0.1869	0.0018	0.78645	1086.6	8.0	1104.5	9.7	1068.0	13.0	1104.5	9.7	1.6
GJCOCE01_62	112.7	1.349	2.069	0.018	0.1990	0.0014	0.79823	1138.4	6.1	1170.0	7.8	1089.0	10.0	1170.0	7.8	2.8
GJCOCE01_63	108.4	1.351	1.836	0.024	0.1785	0.0017	0.86839	1057.9	8.5	1058.4	9.5	1079.0	11.0	1058.4	9.5	0.0
GJCOCE01_64	118	1.757	0.096	0.003	0.0147	0.0003	0.9482	92.9	3.1	94.0	2.0	188.0	29.0	94.0	2.0	1.2
GJCOCE01_65	208.5	1.7	4.470	0.026	0.3081	0.0022	0.70135	1725.2	4.7	1731.0	11.0	1718.0	8.2	1718.0	8.2	0.8
GJCOCE01_66	211	1.957	1.574	0.011	0.1622	0.0013	0.68855	959.8	4.5	968.8	7.3	938.1	8.2	968.8	7.3	0.9
GJCOCE01_67	42.1	0.657	5.180	0.270	0.3212	0.0039	0.91903	1828.0	39.0	1795.0	19.0	1860.0	64.0	1860.0	64.0	3.5
GJCOCE01_68	65.2	1.02	0.092	0.006	0.0124	0.0003	0.98216	89.2	5.8	79.2	2.0	480.0	100.0	79.2	2.0	11.2
GJCOCE01_69	293.1	1.613	14.490	0.180	0.5221	0.0047	0.96288	2783.0	12.0	2707.0	20.0	2846.0	11.0	2846.0	11.0	4.9
GJCOCE01_70	56.55	0.86	0.625	0.012	0.0785	0.0009	0.79223	492.6	7.6	487.3	5.4	509.0	25.0	487.3	5.4	1.1
GJCOCE01_71	1150	2.33	0.104	0.002	0.0156	0.0003	0.94599	100.5	2.2	99.6	2.0	147.0	25.0	99.6	2.0	0.9
GJCOCE01_72	198.9	1.416	0.093	0.002	0.0122	0.0002	0.92559	90.2	2.2	78.1	1.2	446.0	46.0	78.1	1.2	13.4
GJCOCE01_73	314	0.979	0.107	0.002	0.0162	0.0002	0.85553	102.9	1.9	103.9	1.3	146.0	21.0	103.9	1.3	1.0
GJCOCE01_74	234	0.987	4.625	0.035	0.3177	0.0024	0.91948	1754.6	6.8	1778.0	12.0	1726.1	7.6	1726.1	7.6	3.0
GJCOCE01_75	51.2	1.12	11.299	0.091	0.4953	0.0043	0.9515	2547.6	7.5	2595.0	19.0	2513.1	7.6	2513.1	7.6	3.3
GJCOCE01_76	153.6	2.28	0.978	0.022	0.1124	0.0014	0.90746	692.0	11.0	686.4	7.9	729.0	29.0	686.4	7.9	0.8
GJCOCE01_77	362	2.078	5.121	0.055	0.3126	0.0038	0.96242	1839.3	9.2	1753.0	19.0	1934.0	12.0	1934.0	12.0	9.4

GJCOCE01_77	190.9	1.928	5.785	0.078	0.3477	0.0048	0.88891	1946.0	12.0	1923.0	23.0	1964.0	12.0	1964.0	12.0	2.1
GJCOCE01_78	103.6	1.012	2.293	0.019	0.2062	0.0017	0.86582	1209.7	6.0	1208.3	9.3	1223.0	14.0	1223.0	14.0	1.2
GJCOCE01_79	41.9	0.953	2.748	0.041	0.2352	0.0025	0.89393	1340.0	11.0	1361.0	13.0	1311.0	16.0	1311.0	16.0	3.8
GJCOCE01_80	23.9	1.018	1.833	0.039	0.1782	0.0036	0.95703	1057.0	14.0	1056.0	20.0	1071.0	23.0	1056.0	20.0	0.1
GJCOCE01_81	200.4	1.336	0.079	0.002	0.0121	0.0002	0.90494	76.7	2.3	77.2	1.4	204.0	31.0	77.2	1.4	0.7
GJCOCE01_82	168.3	0.895	0.099	0.005	0.0131	0.0002	0.94997	95.4	4.7	83.8	1.4	421.0	74.0	83.8	1.4	12.2
GJCOCE01_83	190	1.266	4.130	0.034	0.2950	0.0024	0.87442	1659.7	6.7	1666.0	12.0	1661.2	8.7	1661.2	8.7	0.3
GJCOCE01_84	196	1.482	0.083	0.002	0.0124	0.0002	0.84872	80.7	2.0	79.4	1.2	186.0	32.0	79.4	1.2	1.6
GJCOCE01_85	22.94	1.006	0.772	0.026	0.0718	0.0019	0.9923	579.0	15.0	447.0	11.0	1213.0	46.0	447.0	11.0	22.8
GJCOCE01_86	76.1	1.482	4.174	0.088	0.2982	0.0060	0.95223	1667.0	17.0	1681.0	30.0	1652.0	10.0	1652.0	10.0	1.8
GJCOCE01_87	178	2.06	3.023	0.024	0.2501	0.0017	0.83357	1413.0	6.0	1438.8	8.6	1380.7	8.3	1380.7	8.3	4.2
GJCOCE01_88	234.4	1.64	4.730	0.039	0.2974	0.0023	0.95721	1772.9	7.1	1678.0	11.0	1891.2	6.7	1891.2	6.7	11.3
GJCOCE01_89	164	0.854	4.822	0.031	0.3204	0.0023	0.73869	1788.5	5.4	1793.0	11.0	1785.3	7.5	1785.3	7.5	0.4
GJCOCE01_90	96.2	2.82	1.902	0.022	0.1852	0.0019	0.80609	1081.3	7.8	1095.0	10.0	1063.0	15.0	1095.0	10.0	1.3
GJCOCE01_91	273	2.47	5.199	0.050	0.3448	0.0030	0.9303	1851.8	8.3	1909.0	14.0	1792.4	8.7	1792.4	8.7	6.5
GJCOCE01_92	240.3	0.8331	0.105	0.005	0.0124	0.0002	0.94715	101.0	4.6	79.5	1.0	658.0	91.0	79.5	1.0	21.3
GJCOCE01_93	84.5	1.086	3.780	0.100	0.2747	0.0035	0.92997	1585.0	21.0	1564.0	18.0	1645.0	32.0	1645.0	32.0	4.9
GJCOCE01_94	197	1.213	0.101	0.003	0.0146	0.0003	0.92804	98.1	2.7	93.7	1.7	243.0	31.0	93.7	1.7	4.5
GJCOCE01_95	28.25	0.3138	11.100	0.210	0.4342	0.0086	0.99084	2533.0	18.0	2330.0	37.0	2691.0	14.0	2691.0	14.0	13.4
GJCOCE01_96	153.1	1.211	0.081	0.003	0.0124	0.0002	0.9191	79.2	2.8	79.5	1.3	192.0	41.0	79.5	1.3	0.4
GJCOCE01_97	282.2	1.085	0.101	0.003	0.0153	0.0002	0.79513	97.8	2.4	98.0	1.2	181.0	34.0	98.0	1.2	0.2
GJCOCE01_98	73.2	4.94	1.935	0.037	0.1914	0.0031	0.93944	1092.0	13.0	1128.0	17.0	1023.0	14.0	1128.0	17.0	3.3
GJCOCE01_99	45.3	1.006	4.131	0.041	0.2973	0.0025	0.9053	1659.9	8.2	1678.0	13.0	1639.0	12.0	1639.0	12.0	2.4
GJCOCE01_100	327	1.195	3.078	0.023	0.2552	0.0018	0.80366	1427.6	5.9	1465.3	9.5	1374.1	6.9	1374.1	6.9	6.6
GJCOCE01_101	178.9	1.191	0.165	0.017	0.0166	0.0012	0.99977	154.0	14.0	106.0	7.4	903.0	52.0	DISC	DISC	31.2
GJCOCE01_102	130.2	2.16	3.275	0.028	0.2618	0.0021	0.82685	1474.6	6.8	1499.0	11.0	1446.4	8.2	1446.4	8.2	3.6
GJCOCE01_103	88.1	1.61	3.137	0.026	0.2546	0.0021	0.77814	1441.4	6.4	1462.0	11.0	1415.0	10.0	1415.0	10.0	3.3
GJCOCE01_104	137.4	1.598	1.879	0.017	0.1838	0.0016	0.74336	1073.3	6.0	1087.6	8.6	1047.0	11.0	1087.6	8.6	1.3
GJCOCE01_105	140.2	1.0065	4.559	0.030	0.3180	0.0023	0.85558	1741.6	5.4	1780.0	11.0	1697.6	7.5	1697.6	7.5	4.9
GJCOCE01_106	243	1.65	3.397	0.070	0.2465	0.0048	0.97686	1503.0	16.0	1420.0	25.0	1621.0	10.0	1621.0	10.0	12.4
GJCOCE01_106	56.1	0.63	3.923	0.098	0.2811	0.0065	0.9585	1617.0	20.0	1596.0	33.0	1642.0	13.0	1642.0	13.0	2.8
GJCOCE01_107	150	2.5	4.744	0.033	0.3280	0.0022	0.8877	1774.7	5.9	1829.0	11.0	1710.0	10.0	1710.0	10.0	7.0
GJCOCE01_108	64.9	0.602	0.131	0.010	0.0156	0.0004	0.96885	123.0	7.7	99.7	2.4	700.0	110.0	99.7	2.4	18.9
GJCOCE01_109	183	1.62	6.110	0.064	0.3628	0.0046	0.90998	1991.3	9.2	1995.0	22.0	1973.4	7.1	1973.4	7.1	1.1
GJCOCE01_110	102	0.562	0.518	0.010	0.0687	0.0007	0.77209	423.6	6.5	428.0	4.4	407.0	23.0	428.0	4.4	1.0

GJCOCE01_111	297.5	1.324	1.660	0.016	0.1633	0.0016	0.88117	994.1	5.9	974.7	9.1	1027.0	17.0	974.7	9.1	2.0
GJCOCE01_112	22.58	0.688	15.200	0.150	0.5506	0.0063	0.96683	2827.1	9.5	2826.0	26.0	2827.0	13.0	2827.0	13.0	0.0
GJCOCE01_113	24.51	0.321	1.559	0.030	0.1596	0.0020	0.888	953.0	12.0	954.0	11.0	933.0	24.0	954.0	11.0	0.1
GJCOCE01_114	228	2.086	1.841	0.015	0.1800	0.0014	0.71888	1060.0	5.5	1067.0	7.6	1039.0	12.0	1067.0	7.6	0.7
GJCOCE01_115	20.8	1.131	1.944	0.046	0.1890	0.0024	0.9242	1094.0	16.0	1118.0	14.0	1071.0	25.0	1118.0	14.0	2.2
GJCOCE01_116	1.868	-18	5.890	0.310	0.4010	0.0140	0.97814	1944.0	45.0	2169.0	66.0	1762.0	55.0	1762.0	55.0	23.1
GJCOCE01_117	246.4	0.791	2.413	0.042	0.2078	0.0033	0.95941	1245.0	13.0	1217.0	18.0	1282.5	8.5	1282.5	8.5	5.1
GJCOCE01_118	426	5.71	2.205	0.059	0.2053	0.0042	0.88437	1185.0	18.0	1203.0	22.0	1163.0	18.0	1163.0	22.0	1.5
GJCOCE01_118	133	1.036	3.056	0.037	0.2496	0.0021	0.67185	1421.4	9.2	1436.0	11.0	1401.0	12.0	1401.0	12.0	2.5
GJCOCE01_119	100.6	1.257	0.091	0.011	0.0130	0.0008	0.99503	88.0	11.0	83.0	5.4	370.0	150.0	83.0	5.4	5.7
GJCOCE01_119	313.3	0.6805	10.100	0.100	0.4223	0.0035	0.98833	2444.5	9.0	2271.0	16.0	2584.6	6.3	2584.6	6.3	12.1
GJCOCE01_120	137.3	0.809	0.084	0.003	0.0125	0.0003	0.92389	81.9	3.1	79.8	1.7	211.0	44.0	79.8	1.7	2.6
13GJCO01_1	52	0.894	15.159	0.098	0.5782	0.0041	0.97648	2825.0	6.1	2941.0	17.0	2749.2	7.2	2749.2	7.2	7.0
13GJCO01_2	148.2	1.668	2.126	0.015	0.1974	0.0016	0.73856	1157.6	4.8	1161.1	8.4	1146.1	7.0	1161.1	8.4	0.3
13GJCO01_3	353	3.09	0.103	0.002	0.0155	0.0002	0.7707	99.3	1.6	99.3	1.2	134.0	17.0	99.3	1.2	0.0
13GJCO01_4	303	0.853	3.420	0.025	0.2633	0.0018	0.7327	1509.4	5.7	1506.6	9.2	1508.6	6.3	1508.6	6.3	0.1
13GJCO01_5	139	1.44	0.096	0.006	0.0133	0.0004	0.99044	93.2	5.3	85.1	2.6	350.0	63.0	85.1	2.6	8.7
13GJCO01_5	108	1.059	1.100	0.049	0.0821	0.0031	0.99971	752.0	23.0	508.0	19.0	1555.0	34.0	DISC	DISC	32.4
13GJCO01_6	19.22	0.7	4.351	0.055	0.3083	0.0033	0.92677	1703.0	10.0	1732.0	16.0	1660.0	18.0	1660.0	18.0	4.3
13GJCO01_7	1410	6.9	1.308	0.037	0.1278	0.0040	0.99014	846.0	16.0	775.0	23.0	1050.4	8.4	775.0	23.0	8.4
13GJCO01_8	250.3	1.278	0.106	0.002	0.0151	0.0002	0.72716	102.3	1.7	96.8	1.1	243.0	29.0	96.8	1.1	5.4
13GJCO01_9	80.3	0.753	11.574	0.093	0.4892	0.0039	0.90574	2570.0	7.5	2567.0	17.0	2569.2	7.0	2569.2	7.0	0.1
13GJCO01_10	105.7	0.725	2.219	0.038	0.2047	0.0018	0.74887	1186.0	11.0	1200.1	9.6	1159.0	24.0	1159.0	9.6	1.2
13GJCO01_11	62.8	0.712	0.082	0.003	0.0125	0.0002	0.96024	80.1	3.1	80.2	1.6	325.0	63.0	80.2	1.6	0.1
13GJCO01_12	110.9	1.602	3.249	0.023	0.2586	0.0020	0.82732	1468.6	5.6	1482.0	10.0	1444.8	8.0	1444.8	8.0	2.6
13GJCO01_13	464	2.028	0.329	0.003	0.0460	0.0004	0.54579	288.5	2.4	289.6	2.1	277.0	14.0	289.6	2.1	0.4
13GJCO01_14	115.9	2.24	0.083	0.003	0.0125	0.0003	0.99878	80.7	2.8	80.1	1.6	242.0	50.0	80.1	1.6	0.7
13GJCO01_15	122.4	1.341	3.493	0.029	0.2651	0.0018	0.79544	1525.3	6.6	1515.7	9.3	1541.0	9.6	1541.0	9.6	1.6
13GJCO01_16	7.98	0.711	4.020	0.100	0.2793	0.0054	0.96142	1636.0	20.0	1591.0	27.0	1686.0	31.0	1686.0	31.0	5.6
13GJCO01_17	474	1.066	0.122	0.009	0.0156	0.0002	0.84074	116.4	7.5	99.9	1.4	490.0	130.0	99.9	1.4	14.2
13GJCO01_18	86.1	1.091	2.366	0.032	0.2128	0.0020	0.75704	1232.0	9.7	1244.0	10.0	1212.0	18.0	1212.0	18.0	2.6
13GJCO01_19	85.5	2.076	1.783	0.019	0.1753	0.0015	0.73968	1038.9	7.1	1041.1	8.0	1039.0	14.0	1041.1	8.0	0.2
13GJCO01_20	165	0.966	0.659	0.009	0.0830	0.0008	0.80978	513.5	5.6	514.0	4.7	516.0	14.0	514.0	4.7	0.1

13GJCO01_21	222.7	2.75	3.431	0.046	0.2558	0.0026	0.87363	1511.0	11.0	1468.0	13.0	1571.0	10.0	1571.0	10.0	6.6
13GJCO01_21	183	1.272	4.323	0.077	0.3071	0.0052	0.9484	1697.0	15.0	1726.0	25.0	1662.0	12.0	1662.0	12.0	3.9
13GJCO01_22	56.4	0.616	1.820	0.023	0.1798	0.0017	0.82172	1052.2	8.4	1065.5	9.4	1030.0	14.0	1065.5	9.4	1.3
13GJCO01_23	347.7	1.5	0.117	0.015	0.0167	0.0014	0.99866	111.0	13.0	106.4	8.9	332.0	92.0	106.4	8.9	4.1
13GJCO01_24	300	1.949	4.307	0.045	0.3043	0.0038	0.78431	1696.4	8.0	1712.0	19.0	1681.0	12.0	1681.0	12.0	1.8
13GJCO01_25	115	1.19	9.710	0.160	0.3820	0.0059	0.99823	2406.0	16.0	2085.0	28.0	2703.2	7.5	2703.2	7.5	22.9
13GJCO01_25	104.6	0.982	16.960	0.270	0.4817	0.0068	0.9957	2932.0	16.0	2534.0	29.0	3212.0	12.0	3212.0	12.0	21.1
13GJCO01_26	148	1.417	0.883	0.010	0.1069	0.0009	0.73879	642.2	5.6	654.8	5.3	614.0	13.0	654.8	5.3	2.0
13GJCO01_27	83	0.754	4.043	0.039	0.2893	0.0025	0.8382	1642.3	7.8	1638.0	13.0	1662.8	9.7	1662.8	9.7	1.5
13GJCO01_28	92.8	1.049	14.020	0.160	0.5261	0.0057	0.94806	2754.0	12.0	2724.0	24.0	2775.3	5.0	2775.3	5.0	1.8
13GJCO01_29	61	0.91	5.230	0.060	0.3520	0.0046	0.97306	1857.0	9.9	1943.0	22.0	1769.4	6.5	1769.4	6.5	9.8
13GJCO01_30	213	1.489	4.270	0.035	0.3038	0.0023	0.87475	1687.1	6.7	1710.0	11.0	1663.7	5.4	1663.7	5.4	2.8
13GJCO01_31	126.9	1.91	0.082	0.003	0.0125	0.0002	0.92164	79.7	2.6	80.1	1.2	201.0	35.0	80.1	1.2	0.5
13GJCO01_32	482	4.23	2.534	0.031	0.2134	0.0027	0.90582	1283.3	8.6	1247.0	14.0	1353.2	7.5	1353.2	7.5	7.8
13GJCO01_33	11.67	0.762	7.080	0.110	0.3967	0.0051	0.96852	2120.0	14.0	2153.0	24.0	2093.0	20.0	2093.0	20.0	2.9
13GJCO01_34	268.7	2.148	4.877	0.031	0.3271	0.0027	0.74824	1798.0	5.4	1824.0	13.0	1772.5	5.9	1772.5	5.9	2.9
13GJCO01_35	68.6	1	4.522	0.035	0.3155	0.0020	0.63281	1735.5	6.2	1767.4	9.8	1704.0	8.2	1704.0	8.2	3.7
13GJCO01_36	37.6	2.531	0.128	0.006	0.0190	0.0004	0.97531	122.9	5.1	121.2	2.6	322.0	50.0	121.2	2.6	1.4
13GJCO01_37	209	1.118	0.105	0.004	0.0154	0.0002	0.87062	101.1	3.5	98.3	1.1	279.0	56.0	98.3	1.1	2.8
13GJCO01_38	367	1.293	4.804	0.039	0.3177	0.0028	0.89117	1785.3	6.9	1778.0	14.0	1788.2	5.5	1788.2	5.5	0.6
13GJCO01_39	107	1.1363	4.069	0.032	0.3005	0.0015	0.80488	1648.9	6.2	1693.6	7.6	1585.3	8.2	1585.3	8.2	6.8
13GJCO01_40	307	2.71	5.158	0.023	0.3390	0.0019	0.82179	1845.5	3.8	1881.8	9.3	1797.5	4.8	1797.5	4.8	4.7
13GJCO01_41	36.1	1.027	1.876	0.035	0.1824	0.0024	0.88634	1072.0	13.0	1080.0	13.0	1023.0	24.0	1080.0	13.0	0.7
13GJCO01_42	54.7	0.797	0.650	0.140	0.0168	0.0012	0.48639	468.0	74.0	107.4	7.4	3100.0	190.0	DISC	DISC	77.1
13GJCO01_43	98.5	2.09	4.060	0.120	0.2938	0.0063	0.96352	1653.0	21.0	1660.0	31.0	1644.0	26.0	1644.0	26.0	1.0
13GJCO01_44	265	1.75	5.080	0.039	0.3368	0.0028	0.8231	1834.1	6.5	1871.0	13.0	1787.6	5.9	1787.6	5.9	4.7
13GJCO01_45	860	4.04	0.105	0.001	0.0158	0.0002	0.70613	101.4	1.3	101.1	1.1	128.0	14.0	101.1	1.1	0.3
13GJCO01_46	127	0.9378	13.770	0.140	0.5411	0.0063	0.95339	2734.0	10.0	2787.0	26.0	2693.8	9.2	2693.8	9.2	3.5
13GJCO01_47	66.2	1.289	2.173	0.026	0.1993	0.0020	0.9099	1171.7	8.2	1171.0	11.0	1155.0	16.0	1171.0	11.0	0.1
13GJCO01_48	30.6	1.796	4.969	0.075	0.3310	0.0052	0.95655	1813.0	13.0	1843.0	25.0	1786.0	11.0	1786.0	11.0	3.2
13GJCO01_49	103.3	1.43	1.932	0.019	0.1889	0.0014	0.60211	1091.8	6.6	1115.1	7.5	1044.0	11.0	1115.1	7.5	2.1
13GJCO01_50	1160	2.07	0.110	0.005	0.0162	0.0007	0.97137	105.6	4.3	103.6	4.3	186.0	30.0	103.6	4.3	1.9
13GJCO01_51	52.4	0.888	0.794	0.020	0.0954	0.0013	0.99592	592.0	11.0	587.2	7.6	609.0	31.0	587.2	7.6	0.8
13GJCO01_52	128.2	0.688	2.980	0.045	0.2431	0.0042	0.97798	1398.8	9.8	1402.0	22.0	1374.0	11.0	1374.0	11.0	2.0
13GJCO01_53	153.9	1.651	1.875	0.021	0.1812	0.0014	0.85668	1071.8	7.3	1073.4	7.4	1064.0	11.0	1073.4	7.4	0.1

13GJCO01_54	203.4	1.02	0.079	0.002	0.0122	0.0002	0.81537	77.3	1.8	77.9	1.0	158.0	30.0	77.9	1.0	0.8
13GJCO01_55	105.5	0.462	3.359	0.031	0.2625	0.0019	0.75426	1494.4	7.3	1504.0	10.0	1486.0	10.0	1486.0	10.0	1.2
13GJCO01_56	147.7	1.453	3.346	0.030	0.2607	0.0022	0.69815	1491.6	6.9	1493.0	11.0	1487.0	12.0	1487.0	12.0	0.4
13GJCO01_57	55.9	0.628	3.070	0.029	0.2513	0.0020	0.72409	1424.8	7.3	1445.0	10.0	1397.7	9.2	1397.7	9.2	3.4
13GJCO01_58	88	1.349	3.490	0.024	0.2711	0.0022	0.79244	1524.6	5.5	1546.0	11.0	1493.6	7.5	1493.6	7.5	3.5
13GJCO01_59	51	1.94	2.017	0.029	0.1889	0.0026	0.87905	1120.7	9.8	1115.0	14.0	1138.0	12.0	1115.0	14.0	0.5
13GJCO01_60	570	2.673	3.053	0.046	0.2048	0.0035	0.99943	1421.0	11.0	1201.0	19.0	1768.0	11.0	DISC	DISC	32.1
13GJCO01_61	95.3	1.7	4.631	0.045	0.3206	0.0030	0.90013	1754.2	8.1	1794.0	14.0	1700.3	6.5	1700.3	6.5	5.5
13GJCO01_62	322.3	2.183	0.104	0.004	0.0143	0.0002	0.8442	100.3	3.4	91.3	1.0	358.0	54.0	91.3	1.0	9.0
13GJCO01_63	121.9	0.697	3.823	0.031	0.2823	0.0021	0.7617	1597.2	6.6	1603.0	11.0	1580.3	6.4	1580.3	6.4	1.4
13GJCO01_64	398	1.192	0.101	0.002	0.0153	0.0002	0.87519	97.2	1.9	98.0	1.5	154.0	23.0	98.0	1.5	0.8
13GJCO01_65	64.8	0.799	0.743	0.015	0.0914	0.0013	0.87021	563.7	8.8	563.5	7.5	550.0	21.0	563.5	7.5	0.0
13GJCO01_66	103	1.271	2.033	0.029	0.1940	0.0022	0.85971	1126.0	9.7	1143.0	12.0	1083.0	12.0	1143.0	12.0	1.5
13GJCO01_67	115.6	1.395	2.025	0.017	0.1959	0.0018	0.75968	1124.2	5.6	1153.3	9.5	1069.0	11.0	1153.3	9.5	2.6
13GJCO01_68	95.7	1.12	4.578	0.046	0.3135	0.0028	0.8165	1744.6	8.4	1758.0	14.0	1732.0	11.0	1732.0	11.0	1.5
13GJCO01_69	197	1.336	0.175	0.004	0.0258	0.0003	0.6983	163.9	3.1	164.3	1.8	197.0	27.0	164.3	1.8	0.2
13GJCO01_70	35.8	1.277	16.830	0.140	0.5946	0.0039	0.96241	2924.4	7.9	3008.0	16.0	2869.5	6.1	2869.5	6.1	4.8
13GJCO01_71	344	1.094	4.256	0.038	0.2863	0.0031	0.94949	1684.5	7.4	1623.0	16.0	1762.3	7.3	1762.3	7.3	7.9
13GJCO01_72	1005	3.86	2.039	0.043	0.1658	0.0043	0.99183	1128.0	14.0	989.0	23.0	1404.0	16.0	989.0	23.0	12.3
13GJCO01_72	541	2.152	2.847	0.032	0.2320	0.0031	0.91307	1367.6	8.4	1345.0	16.0	1394.4	8.6	1394.4	8.6	3.5
13GJCO01_73	399.1	3.22	2.982	0.026	0.2442	0.0032	0.85932	1402.6	6.8	1408.0	17.0	1398.4	9.8	1398.4	9.8	0.7
13GJCO01_74	91.1	0.4781	0.854	0.012	0.1010	0.0011	0.90884	626.6	6.6	620.3	6.5	660.0	23.0	620.3	6.5	1.0
13GJCO01_75	91.5	0.823	3.650	0.180	0.2657	0.0096	0.98948	1575.0	35.0	1515.0	50.0	1686.0	20.0	1686.0	20.0	10.1
13GJCO01_76	23.15	0.697	3.322	0.073	0.2514	0.0030	0.92133	1483.0	17.0	1445.0	15.0	1537.0	28.0	1537.0	28.0	6.0
13GJCO01_77	227.6	2.04	1.975	0.019	0.1894	0.0016	0.80138	1106.7	6.4	1118.0	8.7	1090.4	8.9	1118.0	8.7	1.0
13GJCO01_78	123.2	0.8502	0.732	0.012	0.0912	0.0011	0.83583	557.1	6.8	562.5	6.6	533.0	21.0	562.5	6.6	1.0
13GJCO01_79	121.2	0.95	4.596	0.034	0.3166	0.0024	0.78189	1748.3	6.3	1775.0	12.0	1716.8	7.1	1716.8	7.1	3.4
13GJCO01_80	23.5	0.1712	1.640	0.055	0.0289	0.0009	0.79601	978.0	19.0	183.9	5.9	3964.0	39.0	DISC	DISC	81.2
13GJCO01_81	149.3	0.884	0.513	0.007	0.0678	0.0007	0.81778	420.1	4.4	422.7	4.0	392.0	22.0	422.7	4.0	0.6
13GJCO01_82	95.6	1.709	2.189	0.025	0.1998	0.0026	0.95833	1177.1	8.1	1174.0	14.0	1188.0	15.0	1174.0	14.0	0.3
13GJCO01_83	418	19.8	4.802	0.034	0.3210	0.0027	0.83072	1785.1	5.9	1795.0	13.0	1776.6	7.5	1776.6	7.5	1.0
13GJCO01_84	193	2.2	4.609	0.054	0.3175	0.0043	0.97154	1750.0	10.0	1777.0	21.0	1712.5	7.1	1712.5	7.1	3.8
13GJCO01_85	252	1.316	0.100	0.003	0.0152	0.0002	0.8634	96.9	2.7	97.3	1.3	178.0	37.0	97.3	1.3	0.4
13GJCO01_86	133.8	0.726	4.255	0.030	0.3033	0.0023	0.74808	1684.5	5.8	1707.0	11.0	1652.0	8.6	1652.0	8.6	3.3
13GJCO01_87	26.6	1.995	5.510	0.100	0.3368	0.0066	0.9746	1895.0	19.0	1863.0	35.0	1927.0	13.0	1927.0	13.0	3.3

13GJCO01_88	238.9	4.37	3.020	0.058	0.2059	0.0038	0.99818	1415.0	15.0	1206.0	20.0	1739.6	6.8	DISC	DISC	30.7
13GJCO01_89	406	5.7	4.795	0.033	0.3221	0.0029	0.83933	1783.7	5.7	1799.0	14.0	1762.9	6.6	1762.9	6.6	2.0
13GJCO01_90	123	0.591	3.931	0.058	0.2802	0.0038	0.96046	1619.0	12.0	1592.0	19.0	1651.3	8.7	1651.3	8.7	3.6
13GJCO01_91	360	1.77	0.101	0.002	0.0154	0.0002	0.74922	97.7	1.8	98.5	1.4	126.0	22.0	98.5	1.4	0.8
13GJCO01_92	1660	2.27	0.112	0.003	0.0159	0.0003	0.89946	107.9	2.3	101.4	1.6	234.0	23.0	101.4	1.6	6.0
13GJCO01_93	159	1.163	0.142	0.007	0.0167	0.0003	0.96726	134.7	6.6	106.9	1.8	666.0	99.0	106.9	1.8	20.6
13GJCO01_95	89.5	2.159	0.077	0.003	0.0123	0.0002	0.94923	75.3	2.7	78.5	1.5	246.0	53.0	78.5	1.5	4.2
13GJCO01_96	91	2.98	2.538	0.044	0.2182	0.0026	0.79471	1282.0	13.0	1272.0	14.0	1283.0	15.0	1283.0	15.0	0.9
13GJCO01_97	106	1.551	0.888	0.012	0.1063	0.0009	0.74677	645.0	6.4	651.2	5.3	616.0	17.0	651.2	5.3	1.0
13GJCO01_98	90.1	0.377	0.570	0.009	0.0730	0.0008	0.80789	457.7	5.5	454.2	4.9	467.0	19.0	454.2	4.9	0.8
13GJCO01_99	107.2	0.911	4.496	0.040	0.3155	0.0032	0.89131	1731.7	7.4	1767.0	16.0	1675.2	7.9	1675.2	7.9	5.5
13GJCO01_100	179	2.16	4.640	0.053	0.3171	0.0031	0.96909	1755.6	9.6	1775.0	15.0	1733.5	9.8	1733.5	9.8	2.4
13GJCO01_101	225	1.929	0.572	0.010	0.0736	0.0010	0.89072	459.1	6.4	457.5	5.7	476.0	17.0	457.5	5.7	0.3
13GJCO01_102	140.1	1.701	5.085	0.049	0.3353	0.0035	0.92498	1832.9	8.2	1866.0	16.0	1797.0	6.9	1797.0	6.9	3.8
13GJCO01_103	136.2	1.802	1.825	0.017	0.1800	0.0014	0.69198	1055.1	6.1	1066.9	7.9	1027.0	12.0	1066.9	7.9	1.1
13GJCO01_104	111.5	1.275	3.716	0.062	0.2587	0.0036	0.93327	1574.0	13.0	1483.0	19.0	1681.0	17.0	1681.0	17.0	11.8
13GJCO01_105	38.16	1.248	4.638	0.067	0.3148	0.0051	0.93422	1761.0	12.0	1763.0	25.0	1750.0	15.0	1750.0	15.0	0.7
13GJCO01_106	38.3	1.035	0.913	0.019	0.1084	0.0014	0.86203	658.0	10.0	663.1	8.4	651.0	28.0	663.1	8.4	0.8
13GJCO01_107	75.4	0.5672	0.098	0.005	0.0157	0.0003	0.953	94.7	4.2	100.1	1.8	269.0	55.0	100.1	1.8	5.7
13GJCO01_108	53.5	1.562	2.202	0.025	0.2108	0.0020	0.86838	1181.2	7.8	1233.0	11.0	1111.0	16.0	1111.0	11.0	4.4
13GJCO01_109	165.9	3.42	2.068	0.021	0.1967	0.0017	0.76782	1137.8	7.0	1157.3	9.4	1115.0	11.0	1157.3	9.4	1.7
13GJCO01_110	163.9	1.11	0.099	0.003	0.0152	0.0002	0.91498	95.6	2.5	97.0	1.4	173.0	35.0	97.0	1.4	1.5
13GJCO01_111	216.9	2.26	0.133	0.020	0.0154	0.0010	0.97922	125.0	17.0	98.5	6.0	650.0	220.0	98.5	6.0	21.2
13GJCO01_112	93.6	1.77	0.174	0.049	0.0129	0.0006	0.97435	151.0	34.0	82.4	3.6	1290.0	250.0	DISC	DISC	45.4
13GJCO01_113	83.6	0.545	2.981	0.027	0.2506	0.0025	0.90999	1402.3	7.0	1441.0	13.0	1341.0	9.7	1341.0	9.7	7.5
13GJCO01_114	39.6	0.603	3.500	0.053	0.2741	0.0040	0.9579	1528.0	11.0	1564.0	20.0	1490.0	13.0	1490.0	13.0	5.0
13GJCO01_115	246	1.053	0.520	0.008	0.0663	0.0005	0.70137	424.6	5.5	413.7	3.1	497.0	25.0	413.7	3.1	2.6
13GJCO01_116	34.1	0.66	3.022	0.035	0.2520	0.0028	0.88907	1413.8	9.1	1451.0	15.0	1382.0	14.0	1382.0	14.0	5.0
13GJCO01_117	216	1.7	0.600	0.010	0.0774	0.0009	0.94362	476.6	6.5	480.5	5.6	463.0	15.0	480.5	5.6	0.8
13GJCO01_119	43.9	0.731	3.470	0.042	0.2710	0.0027	0.83593	1520.6	9.7	1546.0	14.0	1488.0	11.0	1488.0	11.0	3.9
13GJCO01_120	261	1.057	3.249	0.084	0.2595	0.0031	0.96757	1473.0	18.0	1487.0	16.0	1478.0	15.0	1478.0	15.0	0.6
13GJCO01_100	74.4	8.05	1.945	0.044	0.1543	0.0028	0.88421	920.0	15.0	898.0	15.0	1028.0	15.0	898.0	15.0	2.4

Table 2b: Near Rangely and Meeker, CO

Sample Name:								207/235		206/238		206/207		Best age		
Grain #	[U] ppm	U/Th	207/235	2σ error	206/238	2σ error	RHO	Age Ma	2σ error	Age (Ma)	2σ error	Age (Ma)	2σ error	(Ma)	2σ error	% Discordance*
S3NESLEN_1	118.8	1.34	6.925	0.051	0.3960	0.0029	0.74844	2101.5	6.5	2150.0	14.0	2056.7	9.3	2056.7	9.3	4.5
S3NESLEN_2	87.9	1.469	2.386	0.033	0.2213	0.0035	0.61139	1238.0	9.9	1289.0	18.0	1162.0	27.0	1162.0	18.0	4.1
S3NESLEN_3	103.7	0.584	4.678	0.031	0.3219	0.0018	0.48694	1765.1	5.4	1800.3	9.0	1721.0	11.0	1721.0	11.0	4.6
S3NESLEN_4	187.2	1.401	3.123	0.030	0.2498	0.0031	0.70472	1438.0	7.5	1437.0	16.0	1446.0	17.0	1446.0	17.0	0.6
S3NESLEN_5	426	1.206	0.113	0.003	0.0160	0.0002	0.35356	108.4	2.9	102.4	1.5	247.0	59.0	102.4	1.5	5.5
S3NESLEN_6	128	0.8297	0.453	0.008	0.0598	0.0005	0.27069	379.3	5.2	374.1	3.3	426.0	37.0	374.1	3.3	1.4
S3NESLEN_7	313	2.051	9.550	0.190	0.3655	0.0037	0.76746	2389.0	18.0	2008.0	18.0	2721.0	18.0	2721.0	18.0	26.2
S3NESLEN_8	131.5	0.732	0.105	0.004	0.0154	0.0003	0.054007	101.5	3.6	98.5	1.6	151.0	63.0	98.5	1.6	3.0
S3NESLEN_9	386	0.787	0.098	0.002	0.0147	0.0001	0.032339	94.8	1.9	94.3	0.8	105.0	44.0	94.3	0.8	0.5
S3NESLEN_11	2.49	0.364	9.820	0.460	0.1222	0.0051	0.40132	2422.0	38.0	746.0	30.0	4478.0	70.0	DISC	DISC	69.2
S3NESLEN_12	92.7	1.081	4.318	0.026	0.3120	0.0022	0.49681	1697.3	4.9	1750.0	11.0	1643.0	13.0	1643.0	13.0	6.5
S3NESLEN_13	177.7	2.021	4.948	0.027	0.3315	0.0023	0.54818	1811.0	4.7	1846.0	11.0	1780.0	11.0	1780.0	11.0	3.7
S3NESLEN_14	125	1.262	1.965	0.018	0.1921	0.0017	0.6154	1103.4	6.2	1132.6	9.1	1062.0	17.0	1132.6	9.1	2.6
S3NESLEN_15	126.6	0.749	0.112	0.003	0.0169	0.0002	0.18426	107.9	2.4	107.7	1.5	128.0	58.0	107.7	1.5	0.2
S3NESLEN_16	123	0.796	1.940	0.017	0.1889	0.0017	0.55116	1096.5	5.8	1115.4	9.0	1059.0	18.0	1115.4	9.0	1.7
S3NESLEN_17	186.5	1.246	4.489	0.035	0.3099	0.0024	0.66211	1729.5	6.6	1742.0	11.0	1722.0	11.0	1722.0	11.0	1.2
S3NESLEN_18	127	0.8601	14.780	0.078	0.5689	0.0033	0.55722	2800.9	5.0	2903.0	14.0	2732.6	8.9	2732.6	8.9	6.2
S3NESLEN_19	60	0.406	5.443	0.051	0.3486	0.0028	0.60946	1891.1	8.1	1930.0	14.0	1861.0	12.0	1861.0	12.0	3.7
S3NESLEN_20	104.2	1.209	2.104	0.019	0.1981	0.0017	0.34485	1149.9	6.3	1164.9	9.0	1141.0	19.0	1164.9	9.0	1.3
S3NESLEN_21	122	1.378	4.147	0.048	0.2991	0.0033	0.94059	1662.8	9.6	1686.0	16.0	1636.0	17.0	1636.0	17.0	3.1
S3NESLEN_22	28.15	0.6433	3.110	0.043	0.2529	0.0027	0.18722	1434.0	11.0	1453.0	14.0	1414.0	33.0	1414.0	33.0	2.8
S3NESLEN_23	52.4	0.744	0.084	0.005	0.0129	0.0003	0.097085	81.7	4.8	82.4	1.8	110.0	120.0	82.4	1.8	0.9
S3NESLEN_24	24.2	0.3178	3.084	0.048	0.0432	0.0008	0.39556	1431.0	12.0	272.8	4.7	4309.0	28.0	DISC	DISC	80.9
S3NESLEN_25	334	1.105	3.089	0.033	0.2440	0.0021	0.60319	1429.7	8.1	1407.0	11.0	1478.0	18.0	1478.0	18.0	4.8
S3NESLEN_26	141	1.345	0.111	0.003	0.0168	0.0002	0.23631	107.1	2.8	107.5	1.5	117.0	60.0	107.5	1.5	0.4

S3NESLEN_27	141.3	1.239	4.245	0.031	0.3068	0.0026	0.52834	1682.6	6.0	1727.0	13.0	1639.0	15.0	1639.0	15.0	5.4
S3NESLEN_28	138.1	1.024	0.456	0.008	0.0611	0.0007	0.17555	381.5	5.4	382.1	4.2	380.0	37.0	382.1	4.2	0.2
S3NESLEN_29	181.2	1.681	3.677	0.057	0.2669	0.0030	0.62978	1566.0	12.0	1525.0	16.0	1631.0	23.0	1631.0	23.0	6.5
S3NESLEN_29	60.5	0.713	4.152	0.071	0.3031	0.0039	0.53424	1664.0	14.0	1707.0	19.0	1614.0	30.0	1614.0	30.0	5.8
S3NESLEN_30	148.1	1.499	2.986	0.023	0.2474	0.0019	0.69612	1404.4	5.9	1425.0	10.0	1380.0	11.0	1380.0	11.0	3.3
S3NESLEN_31	645	8.06	2.199	0.073	0.1663	0.0028	0.17345	1183.0	24.0	992.0	15.0	1558.0	69.0	992.0	15.0	16.1
S3NESLEN_31	110.2	1.72	2.001	0.034	0.1896	0.0031	0.5475	1115.0	11.0	1119.0	17.0	1112.0	33.0	1119.0	17.0	0.4
S3NESLEN_32	170	1.353	0.496	0.006	0.0657	0.0006	0.29512	408.8	4.3	410.4	3.4	391.0	31.0	410.4	3.4	0.4
S3NESLEN_33	140.6	1.225	0.103	0.003	0.0157	0.0002	0.074552	99.5	2.6	100.3	1.5	115.0	63.0	100.3	1.5	0.8
S3NESLEN_34	346	1.02	0.180	0.003	0.0265	0.0004	0.5483	168.0	2.8	168.4	2.2	156.0	32.0	168.4	2.2	0.2
S3NESLEN_35	121.5	0.968	3.363	0.028	0.2656	0.0034	0.42837	1495.5	6.6	1518.0	17.0	1469.0	25.0	1469.0	25.0	3.3
S3NESLEN_36	303.3	0.747	0.513	0.006	0.0673	0.0005	0.3828	420.6	4.2	419.7	3.1	428.0	28.0	419.7	3.1	0.2
S3NESLEN_37	929	1.456	0.090	0.001	0.0131	0.0001	0.3799	87.5	1.1	83.7	0.8	175.0	28.0	83.7	0.8	4.3
S3NESLEN_38	541	2.192	4.388	0.047	0.3059	0.0035	0.82608	1709.8	8.9	1720.0	17.0	1701.6	9.6	1701.6	9.6	1.1
S3NESLEN_38	351.3	2.23	4.759	0.033	0.3308	0.0029	0.59002	1777.7	5.7	1842.0	14.0	1712.0	14.0	1712.0	14.0	7.6
S3NESLEN_39	227.4	0.554	0.085	0.002	0.0126	0.0002	0.11484	83.1	2.1	80.9	0.9	146.0	59.0	80.9	0.9	2.6
S3NESLEN_40	270.6	1.047	6.156	0.040	0.3624	0.0028	0.66857	1998.0	5.7	1993.0	13.0	2005.0	11.0	2005.0	11.0	0.6
S3NESLEN_41	112.3	1.898	1.684	0.022	0.1669	0.0019	0.33177	1002.3	8.2	995.0	11.0	1015.0	31.0	995.0	11.0	0.7
S3NESLEN_42	248.8	0.7283	2.648	0.018	0.2299	0.0017	0.673	1314.0	5.0	1334.0	8.8	1291.0	11.0	1291.0	11.0	3.3
S3NESLEN_43	75.9	1.024	1.850	0.051	0.1748	0.0022	0.12358	1057.0	15.0	1038.0	12.0	1069.0	34.0	1038.0	12.0	1.8
S3NESLEN_44	318	1.258	0.378	0.027	0.0181	0.0003	0.54407	322.0	20.0	115.4	2.1	2319.0	97.0	DISC	DISC	64.2
S3NESLEN_45	114.7	1.903	0.106	0.004	0.0163	0.0002	0.044944	102.1	3.3	104.4	1.5	59.0	76.0	104.4	1.5	2.3
S3NESLEN_46	196.1	0.676	10.120	0.140	0.4616	0.0061	0.90941	2445.0	12.0	2446.0	27.0	2446.5	9.1	2446.5	9.1	0.0
S3NESLEN_47	242	1.891	5.126	0.040	0.3392	0.0028	0.90075	1841.2	7.1	1883.0	13.0	1796.9	9.7	1796.9	9.7	4.8
S3NESLEN_48	225	3.2	4.644	0.037	0.3222	0.0024	0.73604	1757.7	6.5	1800.0	11.0	1712.0	9.7	1712.0	9.7	5.1
S3NESLEN_49	216	2.721	0.102	0.003	0.0148	0.0002	0.2405	98.8	2.7	94.7	1.3	182.0	61.0	94.7	1.3	4.1
S3NESLEN_50	193.9	0.8116	0.096	0.003	0.0146	0.0002	0.18705	93.2	2.4	93.2	1.1	117.0	59.0	93.2	1.1	0.0
S3NESLEN_51	214	2.12	1.820	0.021	0.1816	0.0017	0.2802	1052.5	7.4	1075.7	9.2	1010.0	26.0	1075.7	9.2	2.2
S3NESLEN_51	94.3	1.233	2.075	0.028	0.1985	0.0025	0.51849	1140.3	9.1	1167.0	13.0	1096.0	26.0	1167.0	13.0	2.3
S3NESLEN_52	223.6	1.046	4.395	0.026	0.3091	0.0021	0.63859	1711.1	4.9	1736.0	10.0	1678.0	9.6	1678.0	9.6	3.5
S3NESLEN_53	40.61	1.08	7.278	0.071	0.4115	0.0033	0.50865	2145.5	8.7	2222.0	15.0	2074.0	16.0	2074.0	16.0	7.1
S3NESLEN_54	123.2	1.342	2.872	0.039	0.2347	0.0024	0.66369	1374.0	10.0	1359.0	13.0	1375.0	20.0	1375.0	20.0	1.2
S3NESLEN_55	23.2	0.6485	5.279	0.065	0.3335	0.0034	0.36331	1865.0	11.0	1855.0	17.0	1867.0	23.0	1867.0	23.0	0.6
S3NESLEN_56	169	1.263	0.209	0.025	0.0176	0.0004	0.73075	188.0	21.0	112.7	2.2	1020.0	220.0	DISC	DISC	40.1
S3NESLEN_57	76	0.7826	5.658	0.069	0.3546	0.0042	0.75438	1924.0	11.0	1956.0	20.0	1885.0	14.0	1885.0	14.0	3.8

S3NESLEN_58	285	1.04	2.639	0.028	0.2293	0.0021	0.86986	1311.1	8.1	1331.0	11.0	1263.0	14.0	1263.0	14.0	5.4
S3NESLEN_59	192	1.347	4.751	0.045	0.3242	0.0023	0.74356	1775.6	8.0	1810.0	11.0	1726.0	11.0	1726.0	11.0	4.9
S3NESLEN_60	115.5	1.163	2.370	0.017	0.2156	0.0016	0.47596	1233.5	5.1	1258.5	8.5	1166.0	16.0	1166.0	8.5	2.0
S3NESLEN_61	141	1.22	3.104	0.027	0.2550	0.0018	0.64041	1433.4	6.5	1463.9	9.5	1381.0	13.0	1381.0	13.0	6.0
S3NESLEN_62	143	1.314	4.845	0.039	0.3306	0.0024	0.34042	1792.3	6.7	1841.0	11.0	1726.0	13.0	1726.0	13.0	6.7
S3NESLEN_63	52.6	0.798	0.088	0.005	0.0124	0.0003	0.022858	85.1	4.5	79.2	1.9	230.0	120.0	79.2	1.9	6.9
S3NESLEN_64	48.9	1.574	16.010	0.110	0.5852	0.0047	0.55124	2877.2	6.4	2969.0	19.0	2815.0	12.0	2815.0	12.0	5.5
S3NESLEN_65	46.61	0.866	4.192	0.090	0.2589	0.0037	0.44179	1671.0	17.0	1487.0	18.0	1916.0	34.0	1916.0	34.0	22.4
S3NESLEN_66	65.9	1.77	2.137	0.026	0.2026	0.0018	0.57856	1161.4	8.5	1189.1	9.9	1109.0	24.0	1189.1	9.9	2.4
S3NESLEN_67	318.6	42.5	1.721	0.015	0.1749	0.0014	0.62653	1016.1	5.5	1039.0	7.8	967.0	14.0	1039.0	7.8	2.3
S3NESLEN_68	25.4	2.33	4.717	0.049	0.3221	0.0032	0.37789	1769.7	8.7	1802.0	15.0	1729.0	22.0	1729.0	22.0	4.2
S3NESLEN_69	104.8	1.444	1.771	0.020	0.1756	0.0021	0.47995	1034.5	7.2	1043.0	12.0	1031.0	23.0	1043.0	12.0	0.8
S3NESLEN_70	51.2	1.076	2.358	0.029	0.2133	0.0022	0.32337	1229.1	8.8	1246.0	12.0	1194.0	25.0	1194.0	12.0	1.4
S3NESLEN_71	127.2	1.117	4.613	0.076	0.3104	0.0047	0.80898	1750.0	14.0	1742.0	23.0	1751.0	14.0	1751.0	14.0	0.5
S3NESLEN_72	106.8	1.604	4.737	0.034	0.3274	0.0024	0.59406	1774.3	5.9	1826.0	12.0	1703.0	13.0	1703.0	13.0	7.2
S3NESLEN_73	928.3	9.98	4.533	0.023	0.3106	0.0016	0.56349	1736.9	4.2	1743.5	8.0	1726.0	10.0	1726.0	10.0	1.0
S3NESLEN_74	197	2.052	2.238	0.022	0.2078	0.0017	0.64934	1192.5	6.8	1216.8	9.2	1151.0	14.0	1151.0	9.2	2.0
S3NESLEN_75	29.9	1.733	1.943	0.030	0.1860	0.0021	0.16627	1098.1	9.8	1100.0	11.0	1083.0	33.0	1100.0	11.0	0.2
S3NESLEN_76	377	1.82	1.700	0.015	0.1577	0.0017	0.63817	1008.2	5.7	944.1	9.2	1137.0	16.0	944.1	9.2	6.4
S3NESLEN_77	691	1.193	0.112	0.001	0.0168	0.0002	0.17466	107.6	1.3	107.7	1.0	103.0	33.0	107.7	1.0	0.0
S3NESLEN_78	74.9	0.9383	4.721	0.043	0.3251	0.0031	0.6891	1770.4	7.7	1814.0	15.0	1718.0	13.0	1718.0	13.0	5.6
S3NESLEN_79	21.1	0.6611	2.236	0.040	0.2066	0.0024	0.28994	1194.0	13.0	1211.0	13.0	1144.0	37.0	1144.0	13.0	1.4
S3NESLEN_80	218	2.177	2.146	0.027	0.2030	0.0021	0.77333	1163.2	8.8	1191.0	11.0	1101.0	17.0	1191.0	11.0	2.4
S3NESLEN_81	328	0.93	0.113	0.002	0.0168	0.0002	0.10718	108.7	2.1	107.2	1.1	139.0	43.0	107.2	1.1	1.4
S3NESLEN_82	254	2.28	2.616	0.016	0.2191	0.0016	0.65421	1305.0	4.5	1276.9	8.5	1349.1	9.8	1349.1	9.8	5.4
S3NESLEN_83	104.9	7.041	5.439	0.033	0.3486	0.0026	0.45858	1890.8	5.3	1928.0	12.0	1849.0	14.0	1849.0	14.0	4.3
S3NESLEN_84	139	1.922	4.732	0.029	0.3278	0.0021	0.63446	1773.3	5.2	1827.0	10.0	1703.0	10.0	1703.0	10.0	7.3
S3NESLEN_85	102.1	0.655	3.914	0.033	0.2833	0.0034	0.69707	1616.1	6.9	1609.0	17.0	1638.0	14.0	1638.0	14.0	1.8
S3NESLEN_86	182.7	1.171	1.971	0.014	0.1908	0.0013	0.49246	1106.0	5.0	1125.5	7.0	1066.0	14.0	1125.5	7.0	1.8
S3NESLEN_87	120.8	1.094	4.092	0.047	0.2865	0.0037	0.76637	1651.9	9.3	1623.0	19.0	1696.0	15.0	1696.0	15.0	4.3
S3NESLEN_88	643	2.29	0.102	0.002	0.0153	0.0002	0.20433	98.6	2.0	97.7	1.2	127.0	41.0	97.7	1.2	0.9
S3NESLEN_89	95	1.739	2.004	0.021	0.1926	0.0018	0.49098	1116.3	7.0	1135.3	9.9	1070.0	18.0	1135.3	9.9	1.7
S3NESLEN_90	41.3	1.214	3.058	0.044	0.2436	0.0029	0.097007	1422.0	11.0	1405.0	15.0	1443.0	35.0	1443.0	35.0	2.6
S3NESLEN_91	57.5	6.39	14.080	0.130	0.5463	0.0050	0.68792	2754.7	8.8	2809.0	21.0	2709.0	13.0	2709.0	13.0	3.7
S3NESLEN_92	370.6	1.65	2.099	0.056	0.1651	0.0035	0.89948	1148.0	18.0	985.0	19.0	1446.0	23.0	985.0	19.0	14.2

S3NESLEN_92	141.3	4.08	3.250	0.100	0.2541	0.0028	0.70135	1469.0	22.0	1459.0	15.0	1486.0	39.0	1486.0	39.0	1.8
S3NESLEN_93	74.7	1.436	1.972	0.026	0.1931	0.0017	0.50649	1107.5	8.8	1137.8	9.2	1042.0	22.0	1137.8	9.2	2.7
S3NESLEN_94	128.1	2.27	0.483	0.007	0.0649	0.0006	0.27033	400.3	4.6	405.1	3.4	370.0	32.0	405.1	3.4	1.2
S3NESLEN_95	372	1.087	0.100	0.002	0.0155	0.0002	0.14419	97.0	2.0	98.9	1.3	65.0	46.0	98.9	1.3	2.0
S3NESLEN_96	144.7	2.344	2.245	0.016	0.2079	0.0012	0.3694	1195.7	4.9	1217.8	6.6	1159.0	13.0	1159.0	6.6	1.8
S3NESLEN_97	137.7	1.552	3.651	0.042	0.2541	0.0030	0.47799	1560.4	9.1	1459.0	15.0	1694.0	20.0	1694.0	20.0	13.9
S3NESLEN_98	447	1.177	0.101	0.002	0.0153	0.0002	0.21838	97.7	1.8	97.6	1.1	107.0	44.0	97.6	1.1	0.1
S3NESLEN_99	406	3.7	9.420	0.230	0.4232	0.0082	0.86357	2377.0	22.0	2274.0	37.0	2458.0	21.0	2458.0	21.0	7.5
S3NESLEN_100	110.2	1.008	4.397	0.042	0.3033	0.0032	0.74631	1712.1	7.8	1707.0	16.0	1716.0	12.0	1716.0	12.0	0.5
S3NESLEN_101	303	0.921	0.104	0.002	0.0157	0.0002	0.065491	100.2	2.2	100.2	1.1	106.0	53.0	100.2	1.1	0.0
S3NESLEN_102	65.1	0.6805	0.589	0.010	0.0759	0.0008	0.11842	470.1	6.4	471.7	4.5	474.0	45.0	471.7	4.5	0.3
S3NESLEN_103	281.2	1.599	5.436	0.049	0.3408	0.0036	0.66054	1892.0	8.3	1891.0	18.0	1882.0	17.0	1882.0	17.0	0.5
S3NESLEN_104	106.8	7.05	4.137	0.034	0.3000	0.0024	0.53833	1661.4	6.7	1691.0	12.0	1623.0	15.0	1623.0	15.0	4.2
S3NESLEN_105	70.2	1.098	1.214	0.015	0.1376	0.0021	0.28863	806.6	7.1	831.0	12.0	752.0	33.0	831.0	12.0	3.0
S3NESLEN_106	52.3	2.081	1.873	0.039	0.1843	0.0021	0.37382	1070.0	13.0	1090.0	11.0	1024.0	33.0	1090.0	11.0	1.9
S3NESLEN_107	166.8	0.912	0.409	0.006	0.0563	0.0006	0.51328	348.5	4.4	353.0	3.9	317.0	33.0	353.0	3.9	1.3
S3NESLEN_108	50.7	1.079	2.108	0.031	0.1949	0.0018	0.42976	1152.0	9.7	1147.8	9.9	1156.0	27.0	1147.8	9.9	0.4
S3NESLEN_109	238	0.908	4.469	0.044	0.3084	0.0029	0.74396	1725.0	8.2	1733.0	14.0	1730.0	14.0	1730.0	14.0	0.2
S3NESLEN_109	88.6	1.196	4.721	0.041	0.3277	0.0030	0.26834	1770.7	7.3	1827.0	14.0	1705.0	22.0	1705.0	22.0	7.2
S3NESLEN_110	4.92	0.145	5.830	0.290	0.1393	0.0045	0.47147	1951.0	42.0	840.0	25.0	3466.0	78.0	DISC	DISC	56.9
S3NESLEN_111	476	1.759	4.769	0.034	0.3276	0.0025	0.76084	1779.1	6.0	1827.0	12.0	1723.5	9.3	1723.5	9.3	6.0
S3NESLEN_112	111.4	1.563	4.834	0.033	0.3297	0.0023	0.38951	1790.6	5.8	1837.0	11.0	1740.0	11.0	1740.0	11.0	5.6
S3NESLEN_113	178	1.306	1.975	0.014	0.1902	0.0012	0.46122	1107.0	4.8	1122.6	6.4	1091.0	14.0	1122.6	6.4	1.4
S3NESLEN_114	434	0.636	0.422	0.021	0.0485	0.0005	0.68544	356.0	15.0	305.3	3.3	674.0	87.0	305.3	3.3	14.2
S3NESLEN_115	144	1.359	0.108	0.003	0.0167	0.0003	0.014094	104.3	3.0	106.9	1.6	93.0	71.0	106.9	1.6	2.5
S3NESLEN_116	19.3	1.548	16.930	0.210	0.5919	0.0084	0.77303	2930.0	12.0	2996.0	34.0	2902.0	14.0	2902.0	14.0	3.2
S3NESLEN_117	280	1.029	0.112	0.006	0.0152	0.0002	0.011149	107.8	5.3	97.2	1.2	293.0	93.0	97.2	1.2	9.8
S3NESLEN_118	279.6	1.047	2.936	0.022	0.2430	0.0017	0.51913	1390.9	5.6	1402.0	9.1	1378.0	14.0	1378.0	14.0	1.7
S3NESLEN_119	127.1	0.38	0.823	0.012	0.1007	0.0011	0.094949	609.1	6.8	618.7	6.6	586.0	39.0	618.7	6.6	1.6
S3NESLEN_120	89.5	1.461	4.335	0.048	0.2934	0.0023	0.35793	1700.4	9.0	1658.0	12.0	1754.0	20.0	1754.0	20.0	5.5
S2SEGO_1	198	0.897	0.107	0.002	0.0163	0.0002	0.15485	102.7	2.2	104.3	1.4	79.0	51.0	104.3	1.4	1.6
S2SEGO_2	135.5	1.725	1.816	0.055	0.1772	0.0040	0.091067	1051.0	20.0	1052.0	22.0	1057.0	78.0	1052.0	22.0	0.1
S2SEGO_2	147.9	0.946	3.202	0.026	0.2587	0.0021	0.39768	1458.5	6.4	1483.0	11.0	1429.0	16.0	1429.0	16.0	3.8

S2SEGO_3	34.8	0.83	1.853	0.027	0.1796	0.0017	0.12747	1063.6	9.7	1064.5	9.3	1054.0	34.0	1064.5	9.3	0.1
S2SEGO_4	56.1	2.333	5.149	0.055	0.3336	0.0029	0.42257	1844.8	9.3	1856.0	14.0	1824.0	18.0	1824.0	18.0	1.8
S2SEGO_5	139.6	1.153	4.573	0.031	0.3132	0.0023	0.52941	1744.9	5.8	1756.0	11.0	1736.0	12.0	1736.0	12.0	1.2
S2SEGO_6	107.2	0.635	4.907	0.046	0.3295	0.0032	0.66046	1804.1	8.1	1836.0	16.0	1782.0	14.0	1782.0	14.0	3.0
S2SEGO_7	89.7	1.408	0.315	0.006	0.0441	0.0006	0.14191	278.4	4.8	278.0	3.4	273.0	51.0	278.0	3.4	0.1
S2SEGO_8	100.3	1.0893	3.468	0.029	0.2743	0.0020	0.4683	1519.6	6.6	1564.0	11.0	1467.0	16.0	1467.0	16.0	6.6
S2SEGO_9	76.6	0.5321	0.084	0.003	0.0128	0.0003	0.12934	81.7	2.7	81.7	1.8	84.0	77.0	81.7	1.8	0.0
S2SEGO_10	118.7	0.973	7.343	0.047	0.4048	0.0027	0.70107	2154.6	5.9	2191.0	12.0	2126.0	10.0	2126.0	10.0	3.1
S2SEGO_11	290	1.31	0.152	0.003	0.0220	0.0002	0.11693	143.2	2.2	140.4	1.2	162.0	36.0	140.4	1.2	2.0
S2SEGO_12	104.5	1.175	16.970	0.100	0.5884	0.0047	0.63923	2932.7	5.8	2982.0	19.0	2896.9	8.5	2896.9	8.5	2.9
S2SEGO_13	69.3	0.7304	13.500	0.100	0.5305	0.0043	0.69383	2714.8	7.1	2743.0	18.0	2699.0	10.0	2699.0	10.0	1.6
S2SEGO_15	163	0.703	0.620	0.027	0.0762	0.0009	0.68248	484.0	13.0	473.1	5.5	519.0	56.0	473.1	5.5	2.3
S2SEGO_16	25.6	2.835	2.313	0.036	0.2116	0.0028	0.2959	1215.0	11.0	1239.0	14.0	1182.0	33.0	1182.0	14.0	2.0
S2SEGO_17	114.8	1.476	9.661	0.082	0.4485	0.0035	0.59666	2402.5	7.8	2388.0	16.0	2421.0	12.0	2421.0	12.0	1.4
S2SEGO_18	76.9	0.703	0.739	0.011	0.0908	0.0010	0.24346	561.3	6.3	560.4	5.7	596.0	37.0	560.4	5.7	0.2
S2SEGO_19	63.5	1.686	2.022	0.022	0.1918	0.0018	0.1728	1122.5	7.5	1131.0	9.7	1111.0	27.0	1131.0	9.7	0.8
S2SEGO_20	239	1.54	0.567	0.006	0.0744	0.0006	0.19908	456.0	3.7	462.5	3.8	437.0	26.0	462.5	3.8	1.4
S2SEGO_21	180	1.575	0.514	0.006	0.0676	0.0006	0.34476	420.8	4.1	421.8	3.6	432.0	27.0	421.8	3.6	0.2
S2SEGO_22	130.8	2.164	1.832	0.017	0.1776	0.0013	0.42464	1056.8	6.1	1054.0	7.2	1073.0	19.0	1054.0	7.2	0.3
S2SEGO_23	789	12.2	3.380	0.059	0.2531	0.0043	0.70375	1499.0	14.0	1454.0	22.0	1574.0	21.0	1574.0	21.0	7.6
S2SEGO_23	347	3.34	3.953	0.034	0.2967	0.0030	0.6498	1624.4	7.0	1675.0	15.0	1569.0	16.0	1569.0	16.0	6.8
S2SEGO_24	142.7	1.571	0.564	0.009	0.0737	0.0007	0.20632	454.1	5.5	458.2	4.2	424.0	36.0	458.2	4.2	0.9
S2SEGO_25	224	2.63	4.253	0.026	0.3048	0.0019	0.71842	1684.1	5.1	1714.8	9.5	1655.0	11.0	1655.0	11.0	3.6
S2SEGO_26	38.7	0.4865	13.590	0.110	0.5232	0.0049	0.59752	2721.3	7.8	2712.0	21.0	2726.0	12.0	2726.0	12.0	0.5
S2SEGO_27	313	1.0471	5.782	0.030	0.3646	0.0021	0.56285	1944.1	4.5	2004.0	10.0	1887.7	9.2	1887.7	9.2	6.2
S2SEGO_28	89.1	2.049	2.465	0.021	0.2203	0.0018	0.55264	1261.3	6.2	1283.2	9.6	1231.0	14.0	1231.0	14.0	4.2
S2SEGO_29	96.6	0.962	1.879	0.024	0.1721	0.0019	0.47012	1074.2	8.2	1024.0	11.0	1189.0	27.0	1024.0	11.0	4.7
S2SEGO_30	149	3.522	17.480	0.200	0.5993	0.0067	0.53108	2962.0	11.0	3027.0	27.0	2925.0	18.0	2925.0	18.0	3.5
S2SEGO_30	66.2	1.451	19.750	0.200	0.6401	0.0070	0.6357	3078.5	9.9	3193.0	27.0	3017.0	14.0	3017.0	14.0	5.8
S2SEGO_31	83.3	1.142	0.762	0.010	0.0939	0.0011	0.3121	574.6	5.8	578.8	6.3	567.0	35.0	578.8	6.3	0.7
S2SEGO_33	78.6	1.74	4.267	0.032	0.3129	0.0027	0.60631	1687.7	5.9	1755.0	13.0	1613.0	16.0	1613.0	16.0	8.8
S2SEGO_34	513	1.564	2.526	0.026	0.2262	0.0033	0.94142	1279.1	7.6	1314.0	18.0	1231.0	17.0	1231.0	17.0	6.7
S2SEGO_35	213.8	2.203	5.023	0.065	0.3339	0.0039	0.94881	1822.0	11.0	1857.0	19.0	1787.0	10.0	1787.0	10.0	3.9
S2SEGO_36	52.1	1.081	1.681	0.022	0.1717	0.0020	0.47169	1000.7	8.1	1021.0	11.0	964.0	22.0	1021.0	11.0	2.0
S2SEGO_37	798	3.73	2.709	0.043	0.1951	0.0031	0.91384	1331.0	12.0	1149.0	17.0	1646.0	13.0	1149.0	17.0	13.7

S2SEGO_37	248	1.366	5.263	0.055	0.3517	0.0046	0.70096	1862.6	8.8	1942.0	22.0	1783.0	19.0	1783.0	19.0	8.9
S2SEGO_38	112.6	1.526	1.796	0.014	0.1820	0.0014	0.15329	1043.8	5.0	1078.0	7.8	969.0	20.0	1078.0	7.8	3.3
S2SEGO_39	106.1	2.195	0.760	0.010	0.0922	0.0010	0.3222	573.9	5.6	568.6	5.7	587.0	29.0	568.6	5.7	0.9
S2SEGO_40	83.2	1.093	1.970	0.028	0.1830	0.0032	0.62471	1104.8	9.6	1083.0	17.0	1151.0	29.0	1083.0	17.0	2.0
S2SEGO_40	56.3	1.298	2.159	0.033	0.2005	0.0027	0.34819	1167.0	11.0	1178.0	14.0	1146.0	30.0	1178.0	14.0	0.9
S2SEGO_41	37.3	0.935	0.906	0.023	0.1072	0.0014	0.0054891	655.0	12.0	656.2	8.0	647.0	58.0	656.2	8.0	0.2
S2SEGO_42	332	1.75	0.107	0.010	0.0152	0.0007	0.97484	102.3	9.2	97.1	4.3	193.0	99.0	97.1	4.3	5.1
S2SEGO_43	201.8	1.109	1.923	0.013	0.1853	0.0013	0.37189	1089.5	4.7	1097.6	7.0	1098.0	15.0	1097.6	7.0	0.7
S2SEGO_44	164	2.29	1.825	0.034	0.1804	0.0030	0.73126	1054.0	12.0	1069.0	16.0	1020.0	24.0	1069.0	16.0	1.4
S2SEGO_45	145	2.59	4.561	0.037	0.3161	0.0025	0.63059	1742.7	6.9	1770.0	12.0	1704.0	13.0	1704.0	13.0	3.9
S2SEGO_46	236	1.459	0.297	0.004	0.0415	0.0004	0.095358	264.3	3.2	261.9	2.2	278.0	37.0	261.9	2.2	0.9
S2SEGO_47	214.4	32.8	0.789	0.009	0.0973	0.0010	0.5283	590.5	5.2	598.7	6.1	571.0	23.0	598.7	6.1	1.4
S2SEGO_48	105.5	1.457	1.602	0.027	0.1661	0.0025	0.82267	970.0	11.0	990.0	14.0	910.0	26.0	990.0	14.0	2.1
S2SEGO_49	32.1	0.969	1.847	0.035	0.1833	0.0027	0.36139	1061.0	13.0	1085.0	15.0	1007.0	42.0	1085.0	15.0	2.3
S2SEGO_50	74.2	1.283	2.073	0.022	0.2008	0.0019	0.36397	1139.5	7.1	1179.6	9.9	1058.0	21.0	1179.6	9.9	3.5
S2SEGO_51	292.5	1	1.988	0.026	0.1798	0.0027	0.76191	1110.9	8.8	1068.0	14.0	1214.0	20.0	1068.0	14.0	3.9
S2SEGO_52	316	1.094	0.122	0.006	0.0156	0.0002	0.52185	117.0	5.4	99.5	1.3	442.0	90.0	99.5	1.3	15.0
S2SEGO_53	115.7	1.508	1.868	0.027	0.1840	0.0020	0.34808	1068.9	9.6	1089.0	11.0	1036.0	24.0	1089.0	11.0	1.9
S2SEGO_54	17.2	0.789	1.971	0.042	0.1891	0.0027	0.0028798	1104.0	14.0	1116.0	15.0	1069.0	48.0	1116.0	15.0	1.1
S2SEGO_55	182	1.65	0.115	0.003	0.0173	0.0003	0.12569	110.1	2.7	110.4	1.7	118.0	61.0	110.4	1.7	0.3
S2SEGO_56	118.8	0.9052	1.811	0.017	0.1759	0.0016	0.67256	1049.2	6.2	1044.5	8.9	1060.0	15.0	1044.5	8.9	0.4
S2SEGO_57	49.8	0.792	1.793	0.022	0.1791	0.0017	0.13984	1043.5	8.2	1061.7	9.2	997.0	29.0	1061.7	9.2	1.7
S2SEGO_58	58.5	2.137	1.862	0.021	0.1843	0.0019	0.44234	1067.3	7.5	1090.0	10.0	1016.0	25.0	1090.0	10.0	2.1
S2SEGO_60	87.9	1.433	4.668	0.044	0.3189	0.0026	0.61144	1761.0	7.8	1784.0	13.0	1730.0	14.0	1730.0	14.0	3.1
S2SEGO_61	93.2	1.017	0.097	0.004	0.0143	0.0003	0.18659	94.2	3.3	91.4	1.7	106.0	77.0	91.4	1.7	3.0
S2SEGO_62	328	3.95	2.961	0.022	0.2442	0.0019	0.68549	1397.5	5.7	1408.4	9.8	1376.0	11.0	1376.0	11.0	2.4
S2SEGO_63	274	3.784	4.660	0.056	0.3238	0.0037	0.64426	1762.0	11.0	1808.0	18.0	1705.0	18.0	1705.0	18.0	6.0
S2SEGO_64	636	4.66	1.505	0.020	0.1515	0.0021	0.89835	933.0	7.9	909.0	12.0	988.0	14.0	909.0	12.0	2.6
S2SEGO_65	950	2.34	0.175	0.003	0.0241	0.0008	0.65636	163.9	2.8	153.5	4.9	357.0	76.0	153.5	4.9	6.3
S2SEGO_66	75.1	1.863	4.124	0.034	0.2995	0.0022	0.47244	1660.4	6.7	1688.0	11.0	1622.0	15.0	1622.0	15.0	4.1
S2SEGO_67	88.2	0.865	13.800	0.130	0.5408	0.0069	0.6697	2735.7	9.1	2786.0	29.0	2689.0	16.0	2689.0	16.0	3.6
S2SEGO_68	306.2	18	6.762	0.056	0.3953	0.0030	0.72983	2080.5	7.3	2147.0	14.0	2016.0	10.0	2016.0	10.0	6.5
S2SEGO_69	389	3.082	1.993	0.014	0.1943	0.0014	0.5944	1113.1	4.7	1144.6	7.3	1044.0	13.0	1144.6	7.3	2.8
S2SEGO_70	366	1.052	0.111	0.002	0.0162	0.0002	0.07367	107.2	2.1	103.3	1.3	195.0	54.0	103.3	1.3	3.6
S2SEGO_71	323	1.421	2.305	0.018	0.2078	0.0016	0.69823	1214.2	5.8	1216.9	8.6	1208.0	13.0	1208.0	13.0	0.7

S2SEGO_72	40.8	1.184	1.686	0.023	0.1690	0.0019	0.31009	1002.6	8.7	1007.0	10.0	1004.0	28.0	1007.0	10.0	0.4
S2SEGO_73	76.7	1.076	1.535	0.019	0.1621	0.0014	0.35729	943.9	7.5	969.3	7.4	905.0	27.0	969.3	7.4	2.7
S2SEGO_74	74.7	1.68	1.964	0.025	0.1918	0.0017	0.33782	1102.8	8.4	1131.1	9.4	1050.0	24.0	1131.1	9.4	2.6
S2SEGO_75	13.43	0.539	4.430	0.180	0.0547	0.0023	0.78133	1712.0	35.0	345.0	14.0	4441.0	46.0	DISC	DISC	79.8
S2SEGO_76	120.3	1.623	0.880	0.013	0.1064	0.0014	0.47503	640.6	7.0	651.4	8.2	604.0	29.0	651.4	8.2	1.7
S2SEGO_77	81.2	0.935	3.548	0.033	0.2751	0.0021	0.22065	1537.5	7.3	1566.0	11.0	1498.0	19.0	1498.0	19.0	4.5
S2SEGO_78	260.9	2.36	4.536	0.071	0.3118	0.0047	0.86422	1738.0	13.0	1749.0	23.0	1728.0	16.0	1728.0	16.0	1.2
S2SEGO_79	472	1.938	4.240	0.031	0.2891	0.0025	0.8269	1681.5	5.9	1637.0	12.0	1732.0	10.0	1732.0	10.0	5.5
S2SEGO_80	280	1.512	0.111	0.002	0.0168	0.0002	0.16408	107.2	1.9	107.2	1.4	102.0	47.0	107.2	1.4	0.0
S2SEGO_81	25.75	1.35	2.424	0.034	0.2095	0.0025	0.31194	1249.0	10.0	1226.0	13.0	1291.0	33.0	1291.0	33.0	5.0
S2SEGO_82	106	1.062	0.120	0.018	0.0166	0.0009	0.9792	108.0	11.0	105.8	5.4	126.0	97.0	105.8	5.4	2.0
S2SEGO_83	84.6	1.25	4.901	0.058	0.3300	0.0028	0.24335	1801.5	9.8	1838.0	14.0	1749.0	22.0	1749.0	22.0	5.1
S2SEGO_84	55.2	0.488	4.276	0.037	0.3053	0.0022	0.51786	1688.4	7.1	1717.0	11.0	1652.0	15.0	1652.0	15.0	3.9
S2SEGO_85	142.7	1.92	4.574	0.035	0.3142	0.0022	0.78286	1744.2	6.3	1761.0	11.0	1734.0	13.0	1734.0	13.0	1.6
S2SEGO_86	38.67	1.707	7.160	0.140	0.3972	0.0084	0.80681	2132.0	18.0	2155.0	39.0	2105.0	20.0	2105.0	20.0	2.4
S2SEGO_87	70.1	1.184	16.440	0.120	0.5884	0.0044	0.72074	2902.3	7.1	2982.0	18.0	2843.0	10.0	2843.0	10.0	4.9
S2SEGO_88	168.8	7.51	1.688	0.025	0.1680	0.0022	0.65213	1003.6	9.5	1001.0	12.0	1016.0	29.0	1001.0	12.0	0.3
S2SEGO_89	290	0.6147	0.383	0.005	0.0530	0.0004	0.34937	329.9	3.4	332.9	2.6	311.0	27.0	332.9	2.6	0.9
S2SEGO_90	101	0.5095	4.064	0.034	0.2905	0.0024	0.41482	1647.5	6.7	1646.0	12.0	1650.0	18.0	1650.0	18.0	0.2
S2SEGO_91	160.6	1.97	3.182	0.052	0.2305	0.0029	0.82072	1452.0	13.0	1337.0	15.0	1626.0	17.0	1626.0	17.0	17.8
S2SEGO_92	54.9	1.075	1.692	0.021	0.1745	0.0014	0.18441	1004.8	8.0	1036.9	7.9	955.0	27.0	1036.9	7.9	3.2
S2SEGO_93	88.6	1.49	6.163	0.060	0.3749	0.0041	0.78859	1998.5	8.5	2054.0	20.0	1960.0	11.0	1960.0	11.0	4.8
S2SEGO_94	300	0.858	0.112	0.002	0.0165	0.0002	0.057298	107.6	1.6	105.5	1.2	170.0	48.0	105.5	1.2	2.0
S2SEGO_95	55.42	0.551	3.102	0.032	0.2552	0.0026	0.40935	1433.6	8.1	1465.0	13.0	1373.0	20.0	1373.0	20.0	6.7
S2SEGO_96	353	1.1514	0.530	0.006	0.0700	0.0007	0.40366	431.7	3.6	436.1	3.9	421.0	25.0	436.1	3.9	1.0
S2SEGO_97	43.73	0.273	5.517	0.050	0.3543	0.0032	0.38615	1902.7	7.8	1955.0	15.0	1850.0	17.0	1850.0	17.0	5.7
S2SEGO_98	75.7	0.5722	4.159	0.037	0.3001	0.0023	0.43754	1665.5	7.4	1692.0	11.0	1634.0	16.0	1634.0	16.0	3.5
S2SEGO_101	54.9	0.6353	3.697	0.042	0.2821	0.0029	0.3841	1572.2	9.4	1602.0	15.0	1532.0	22.0	1532.0	22.0	4.6
S2SEGO_102	314	1.014	0.099	0.002	0.0153	0.0002	0.16811	95.4	1.8	97.9	1.4	52.0	48.0	97.9	1.4	2.6
S2SEGO_103	121.1	1.349	4.960	0.037	0.3365	0.0026	0.68174	1812.2	6.3	1870.0	12.0	1743.0	11.0	1743.0	11.0	7.3
S2SEGO_104	32.3	0.7299	4.338	0.048	0.3036	0.0034	0.42521	1699.9	9.1	1709.0	17.0	1689.0	23.0	1689.0	23.0	1.2
S2SEGO_105	1156	2.132	0.106	0.002	0.0156	0.0002	0.3446	102.1	1.4	99.6	1.2	130.0	35.0	99.6	1.2	2.4
S2SEGO_106	134	1.284	4.569	0.045	0.3226	0.0028	0.55575	1743.2	8.2	1802.0	13.0	1669.0	14.0	1669.0	14.0	8.0
S2SEGO_107	250.7	1.887	0.110	0.002	0.0163	0.0002	0.12011	105.7	2.2	104.3	1.4	143.0	51.0	104.3	1.4	1.3
S2SEGO_108	291	1.156	0.422	0.005	0.0574	0.0005	0.25834	357.2	3.2	359.9	3.0	341.0	25.0	359.9	3.0	0.8

S2SEGO_109	322	1.746	0.192	0.003	0.0280	0.0003	0.29511	178.1	2.6	178.0	2.0	172.0	38.0	178.0	2.0	0.1
S2SEGO_110	101.5	1.524	1.889	0.027	0.1811	0.0020	0.71449	1076.4	9.3	1073.0	11.0	1073.0	19.0	1073.0	11.0	0.3
S2SEGO_111	326	0.835	0.869	0.007	0.1047	0.0007	0.3863	634.8	3.9	641.6	3.9	602.0	18.0	641.6	3.9	1.1
S2SEGO_112	167	1.098	0.545	0.006	0.0715	0.0007	0.052511	441.2	3.9	445.4	4.3	410.0	33.0	445.4	4.3	1.0
S2SEGO_113	70.6	0.942	4.163	0.040	0.3059	0.0029	0.55284	1666.2	7.8	1720.0	14.0	1590.0	18.0	1590.0	18.0	8.2
S2SEGO_114	32.24	1.137	2.308	0.043	0.2071	0.0027	0.41458	1214.0	13.0	1213.0	14.0	1187.0	35.0	1187.0	14.0	0.1
S2SEGO_115	57	1.3	0.796	0.016	0.0985	0.0011	0.31396	596.0	8.4	605.8	6.6	544.0	44.0	605.8	6.6	1.6
S2SEGO_116	225.1	1.16	2.631	0.051	0.2078	0.0025	0.38014	1309.0	14.0	1217.0	13.0	1445.0	40.0	1445.0	40.0	15.8
S2SEGO_117	55.2	1.005	4.264	0.047	0.3026	0.0027	0.56596	1685.7	9.1	1704.0	13.0	1651.0	18.0	1651.0	18.0	3.2
S2SEGO_118	468	1.53	0.303	0.005	0.0426	0.0004	0.31511	268.9	3.5	268.9	2.5	258.0	33.0	268.9	2.5	0.0
S2SEGO_119	119.2	0.8897	0.108	0.004	0.0161	0.0003	0.039389	104.4	3.4	103.1	1.8	139.0	79.0	103.1	1.8	1.2
S2SEGO_120	82.5	1.069	3.663	0.050	0.2821	0.0033	0.86952	1562.0	11.0	1602.0	17.0	1494.0	18.0	1494.0	18.0	7.2
S1LOYD_1	442	1.958	0.105	0.002	0.0163	0.0002	0.39125	101.3	1.6	104.4	1.3	112.0	16.0	104.4	1.3	3.1
S1LOYD_2	284	2.25	0.487	0.013	0.0636	0.0016	0.91651	401.8	8.8	397.6	9.4	426.9	9.1	397.6	9.4	1.0
S1LOYD_3	162.4	0.67	0.782	0.009	0.0958	0.0011	0.37276	586.4	5.0	589.5	6.2	557.0	16.0	589.5	6.2	0.5
S1LOYD_4	652	4.315	1.597	0.027	0.1211	0.0030	0.47519	968.0	10.0	736.0	17.0	1502.0	29.0	736.0	17.0	24.0
S1LOYD_5	225.6	1.651	0.097	0.003	0.0149	0.0002	0.22499	94.2	2.4	95.4	1.3	158.0	30.0	95.4	1.3	1.3
S1LOYD_6	509	15.65	0.509	0.004	0.0662	0.0005	0.30881	417.8	2.7	413.4	2.7	450.0	11.0	413.4	2.7	1.1
S1LOYD_7	108	1.219	1.759	0.036	0.1724	0.0031	0.83946	1032.0	13.0	1025.0	17.0	1029.0	15.0	1025.0	17.0	0.7
S1LOYD_8	121	0.821	6.619	0.061	0.3840	0.0035	0.64965	2061.3	8.0	2097.0	16.0	2022.1	8.8	2022.1	8.8	3.7
S1LOYD_9	119.7	0.938	2.074	0.019	0.1974	0.0017	0.43586	1139.9	6.1	1161.4	9.0	1107.7	9.3	1161.4	9.0	1.9
S1LOYD_10	131	1.87	0.641	0.010	0.0831	0.0012	0.66589	502.6	5.9	514.8	7.1	460.0	17.0	514.8	7.1	2.4
S1LOYD_11	49.7	0.6583	3.381	0.041	0.2506	0.0035	0.64589	1499.1	9.5	1441.0	18.0	1593.0	11.0	1593.0	11.0	9.5
S1LOYD_13	292	1.249	0.109	0.003	0.0160	0.0002	0.1814	105.0	2.5	102.4	1.6	183.0	27.0	102.4	1.6	2.5
S1LOYD_14	175	0.62	4.552	0.038	0.3167	0.0029	0.57123	1741.0	7.1	1773.0	14.0	1693.9	9.9	1693.9	9.9	4.7
S1LOYD_15	352	1.223	4.760	0.044	0.3072	0.0021	0.80268	1778.2	7.6	1727.0	10.0	1835.9	5.2	1835.9	5.2	5.9
S1LOYD_16	65	1.209	2.661	0.048	0.2327	0.0036	0.77077	1318.0	14.0	1348.0	19.0	1271.0	13.0	1271.0	13.0	6.1
S1LOYD_17	147.7	1.899	1.632	0.013	0.1658	0.0014	0.54915	983.1	4.8	989.0	7.6	957.1	8.0	989.0	7.6	0.6
S1LOYD_18	264.7	1.044	0.873	0.009	0.1036	0.0009	0.39144	637.1	4.8	635.5	5.1	648.0	12.0	635.5	5.1	0.3
S1LOYD_19	118.6	1.077	0.544	0.008	0.0688	0.0007	0.22682	441.0	5.2	428.7	4.1	504.0	19.0	428.7	4.1	2.8
S1LOYD_20	328	0.985	0.087	0.002	0.0136	0.0002	0.084714	84.7	1.5	87.1	1.1	134.0	23.0	87.1	1.1	2.8
S1LOYD_21	252	0.8407	0.545	0.006	0.0709	0.0006	0.29787	441.2	4.2	441.3	3.6	437.0	16.0	441.3	3.6	0.0
S1LOYD_22	97.8	0.928	1.870	0.017	0.1793	0.0016	0.42396	1071.0	6.2	1063.1	8.5	1085.0	14.0	1063.1	8.5	0.7

S1LOYD_23	306	1.817	0.563	0.009	0.0731	0.0012	0.88848	453.4	5.9	454.6	7.0	460.0	13.0	454.6	7.0	0.3
S1LOYD_24	335	0.936	0.115	0.002	0.0155	0.0002	0.15506	110.2	2.2	99.1	1.0	379.0	26.0	99.1	1.0	10.1
S1LOYD_26	143.2	1.654	5.190	0.034	0.3311	0.0024	0.55183	1850.7	5.5	1844.0	11.0	1855.3	6.1	1855.3	6.1	0.6
S1LOYD_27	123.9	1.14	7.300	0.160	0.3622	0.0070	0.91908	2148.0	19.0	1991.0	33.0	2306.6	9.4	2306.6	9.4	13.7
S1LOYD_28	332	1.627	2.084	0.024	0.2008	0.0025	0.74105	1143.2	7.8	1179.0	14.0	1074.0	11.0	1179.0	14.0	3.1
S1LOYD_29	25.2	0.5693	2.247	0.040	0.2030	0.0026	0.44032	1196.0	12.0	1193.0	14.0	1207.0	22.0	1193.0	14.0	0.3
S1LOYD_30	223	1.143	3.709	0.043	0.2779	0.0031	0.96146	1568.0	11.0	1580.0	16.0	1558.6	8.0	1558.6	8.0	1.4
S1LOYD_31	493.2	1.354	0.119	0.005	0.0162	0.0002	0.30742	114.1	4.5	103.6	1.0	322.0	71.0	103.6	1.0	9.2
S1LOYD_32	414	1.736	3.831	0.044	0.2255	0.0025	0.8277	1598.7	9.2	1311.0	13.0	1999.1	8.5	DISC	DISC	34.4
S1LOYD_33	177	1.075	2.884	0.024	0.2365	0.0019	0.53174	1377.3	6.2	1369.5	9.4	1377.1	8.9	1377.1	8.9	0.6
S1LOYD_34	37.9	0.914	1.823	0.037	0.1757	0.0025	0.83722	1052.0	14.0	1043.0	14.0	1083.0	19.0	1043.0	14.0	0.9
S1LOYD_36	189	1.275	0.377	0.006	0.0522	0.0006	0.18207	325.0	4.5	327.7	3.7	309.0	22.0	327.7	3.7	0.8
S1LOYD_37	45	1.535	13.460	0.110	0.5291	0.0056	0.66341	2712.2	7.7	2737.0	24.0	2700.1	7.4	2700.1	7.4	1.4
S1LOYD_38	32.3	1.101	4.383	0.064	0.3064	0.0034	0.78638	1708.0	12.0	1723.0	17.0	1693.0	18.0	1693.0	18.0	1.8
S1LOYD_39	419	6.9	2.383	0.046	0.2116	0.0037	0.91772	1236.0	14.0	1240.0	19.0	1244.8	9.1	1244.8	9.1	0.4
S1LOYD_40	154.6	0.643	7.173	0.041	0.3991	0.0027	0.58147	2132.9	5.1	2165.0	12.0	2102.0	6.1	2102.0	6.1	3.0
S1LOYD_41	110.3	1.632	1.957	0.021	0.1883	0.0015	0.43188	1101.5	7.5	1112.0	8.0	1096.0	13.0	1112.0	8.0	1.0
S1LOYD_42	150	1.25	0.091	0.003	0.0136	0.0002	0.0088491	88.6	2.5	87.2	1.5	209.0	33.0	87.2	1.5	1.6
S1LOYD_43	311	1.58	0.800	0.015	0.0935	0.0019	0.91461	595.9	8.8	576.0	12.0	705.0	19.0	576.0	12.0	3.3
S1LOYD_44	113.4	2.312	1.762	0.014	0.1746	0.0016	0.34151	1031.4	5.2	1037.6	8.9	1025.0	14.0	1037.6	8.9	0.6
S1LOYD_45	111	1.708	2.076	0.023	0.1942	0.0022	0.53711	1141.8	7.8	1144.0	12.0	1151.0	13.0	1144.0	12.0	0.2
S1LOYD_46	61.19	1.071	2.259	0.023	0.2078	0.0017	0.34326	1199.2	7.1	1216.9	9.1	1169.0	13.0	1169.0	9.1	1.5
S1LOYD_47	43.9	1.302	2.008	0.024	0.1900	0.0018	0.39901	1117.5	8.0	1121.0	10.0	1119.0	16.0	1121.0	10.0	0.3
S1LOYD_48	210.3	0.893	4.254	0.030	0.3052	0.0023	0.68601	1684.1	5.8	1717.0	11.0	1650.9	6.9	1650.9	6.9	4.0
S1LOYD_49	269	2.856	4.877	0.028	0.3310	0.0023	0.53615	1798.1	4.8	1845.0	11.0	1741.4	5.1	1741.4	5.1	5.9
S1LOYD_50	38.6	1.188	1.832	0.030	0.1824	0.0022	0.45702	1056.0	11.0	1080.0	12.0	1000.0	19.0	1080.0	12.0	2.3
S1LOYD_51	38.1	0.96	1.788	0.025	0.1777	0.0025	0.25305	1041.5	9.0	1054.0	14.0	1038.0	19.0	1054.0	14.0	1.2
S1LOYD_52	586	1.204	0.104	0.002	0.0158	0.0002	0.37848	100.5	1.4	101.0	1.1	104.0	17.0	101.0	1.1	0.5
S1LOYD_53	29.7	1.71	3.462	0.059	0.2532	0.0036	0.33476	1517.0	13.0	1455.0	18.0	1597.0	22.0	1597.0	22.0	8.9
S1LOYD_54	212	0.7795	1.811	0.015	0.1806	0.0013	0.43441	1049.9	5.5	1070.0	6.9	1009.7	9.1	1070.0	6.9	1.9
S1LOYD_55	262	2.4	4.741	0.029	0.3199	0.0021	0.63812	1775.0	5.0	1789.0	10.0	1750.8	6.5	1750.8	6.5	2.2
S1LOYD_56	139.1	1.321	4.815	0.031	0.3241	0.0019	0.36889	1787.2	5.5	1809.8	9.4	1759.4	8.2	1759.4	8.2	2.9
S1LOYD_57	35	1.652	1.700	0.023	0.1699	0.0017	0.30316	1007.9	8.7	1011.3	9.3	1003.0	16.0	1011.3	9.3	0.3
S1LOYD_58	371	1.482	3.107	0.024	0.2536	0.0024	0.95298	1434.2	6.0	1457.0	12.0	1404.7	8.5	1404.7	8.5	3.7
S1LOYD_59	166.7	2.06	2.093	0.024	0.1939	0.0019	0.4811	1145.9	7.8	1142.0	10.0	1157.0	12.0	1142.0	10.0	0.3

S1LOYD_60	16.3	0.823	1.724	0.038	0.1689	0.0026	0.29564	1018.0	14.0	1006.0	14.0	1034.0	25.0	1006.0	14.0	1.2
S1LOYD_62	146	1.111	3.493	0.036	0.2607	0.0031	0.90228	1525.0	8.3	1493.0	16.0	1569.9	8.0	1569.9	8.0	4.9
S1LOYD_63	69.7	1.473	3.307	0.033	0.2653	0.0022	0.42887	1482.0	7.7	1517.0	11.0	1436.3	8.5	1436.3	8.5	5.6
S1LOYD_64	219.3	1.688	3.510	0.039	0.2708	0.0027	0.8277	1528.8	8.9	1545.0	13.0	1510.1	7.4	1510.1	7.4	2.3
S1LOYD_65	254	2.17	2.125	0.021	0.1948	0.0020	0.66295	1156.7	6.9	1150.0	11.0	1177.0	11.0	1150.0	11.0	0.6
S1LOYD_66	93.2	1.418	1.978	0.020	0.1896	0.0017	0.42079	1107.6	7.0	1118.9	9.1	1095.0	14.0	1118.9	9.1	1.0
S1LOYD_67	489	1.223	3.865	0.063	0.2683	0.0043	0.93578	1606.0	13.0	1532.0	22.0	1707.6	7.6	1707.6	7.6	10.3
S1LOYD_68	191.2	1.93	4.232	0.029	0.3041	0.0023	0.50924	1680.0	5.7	1711.0	11.0	1646.3	6.2	1646.3	6.2	3.9
S1LOYD_69	528	1.688	0.103	0.002	0.0154	0.0001	0.076431	99.7	1.4	98.5	0.8	162.0	23.0	98.5	0.8	1.2
S1LOYD_70	124.8	0.887	0.546	0.010	0.0705	0.0007	0.21067	441.7	6.4	438.9	4.4	471.0	23.0	438.9	4.4	0.6
S1LOYD_72	26.62	0.887	2.344	0.039	0.2124	0.0023	0.5277	1224.0	12.0	1242.0	12.0	1210.0	21.0	1210.0	21.0	2.6
S1LOYD_73	132.9	0.7266	0.933	0.049	0.0959	0.0010	0.53231	664.0	25.0	590.2	6.0	897.0	87.0	590.2	6.0	11.1
S1LOYD_74	322	1.295	0.106	0.002	0.0163	0.0002	0.12375	102.2	2.1	103.9	1.4	154.0	27.0	103.9	1.4	1.7
S1LOYD_75	143	1.983	2.931	0.018	0.2455	0.0019	0.35794	1389.8	4.8	1414.8	9.7	1357.0	9.4	1357.0	9.4	4.3
S1LOYD_76	200	1.218	3.438	0.052	0.2402	0.0035	0.95646	1512.0	12.0	1387.0	18.0	1699.6	9.0	1699.6	9.0	18.4
S1LOYD_77	146	0.836	0.101	0.003	0.0149	0.0003	0.11696	97.9	3.0	95.2	1.6	214.0	36.0	95.2	1.6	2.8
S1LOYD_78	223.9	1.869	4.342	0.037	0.2978	0.0029	0.79771	1702.0	7.3	1682.0	14.0	1726.3	8.2	1726.3	8.2	2.6
S1LOYD_79	265	0.862	0.103	0.002	0.0159	0.0002	0.40748	99.5	2.0	101.9	1.5	110.0	22.0	101.9	1.5	2.4
S1LOYD_80	149.5	1.057	13.950	0.150	0.5488	0.0054	0.79837	2747.1	9.6	2819.0	23.0	2704.7	8.0	2704.7	8.0	4.2
S1LOYD_81	105.6	1.536	5.183	0.043	0.3347	0.0027	0.49348	1850.3	7.3	1861.0	13.0	1849.0	11.0	1849.0	11.0	0.6
S1LOYD_82	51.1	1.193	13.970	0.350	0.5363	0.0080	0.8982	2745.0	23.0	2771.0	33.0	2723.0	18.0	2723.0	18.0	1.8
S1LOYD_83	63	1.62	1.850	0.042	0.1699	0.0035	0.7039	1065.0	14.0	1011.0	19.0	1192.0	22.0	1011.0	19.0	5.1
S1LOYD_84	403	0.693	0.523	0.007	0.0682	0.0008	0.80209	426.7	4.6	425.2	4.7	432.0	11.0	425.2	4.7	0.4
S1LOYD_85	140.7	0.689	4.900	0.031	0.3286	0.0022	0.41041	1802.1	5.3	1831.0	11.0	1772.4	8.3	1772.4	8.3	3.3
S1LOYD_86	46.8	0.6209	5.979	0.051	0.3533	0.0032	0.4927	1973.4	7.2	1950.0	15.0	1997.1	8.4	1997.1	8.4	2.4
S1LOYD_89	292	0.886	0.098	0.002	0.0152	0.0002	0.11959	94.5	1.7	97.0	1.1	124.0	21.0	97.0	1.1	2.6
S1LOYD_90	176	1.548	2.935	0.056	0.2454	0.0039	0.96995	1385.0	17.0	1414.0	20.0	1365.9	9.7	1365.9	9.7	3.5
S1LOYD_91	290	3.29	1.538	0.018	0.1582	0.0017	0.61356	945.4	7.0	946.4	9.5	933.0	11.0	946.4	9.5	0.1
S1LOYD_92	51.2	0.708	2.705	0.028	0.2328	0.0020	0.47111	1330.3	7.9	1349.0	11.0	1302.0	11.0	1302.0	11.0	3.6
S1LOYD_93	64.2	0.834	3.878	0.052	0.2922	0.0029	0.60382	1609.0	11.0	1652.0	14.0	1557.0	12.0	1557.0	12.0	6.1
S1LOYD_94	106.4	0.99	4.067	0.028	0.2912	0.0024	0.44539	1647.3	5.6	1647.0	12.0	1647.8	8.3	1647.8	8.3	0.0
S1LOYD_95	37	0.852	1.861	0.034	0.1806	0.0020	0.44765	1066.0	12.0	1071.0	11.0	1056.0	20.0	1071.0	11.0	0.5
S1LOYD_96	62.1	1.23	2.362	0.096	0.2080	0.0068	0.92589	1236.0	29.0	1222.0	35.0	1268.0	23.0	1268.0	23.0	3.6
S1LOYD_97	32	0.7546	2.956	0.036	0.2488	0.0028	0.4771	1395.5	9.4	1434.0	15.0	1337.0	16.0	1337.0	16.0	7.3
S1LOYD_98	499	1.21	0.119	0.004	0.0145	0.0003	0.48621	113.7	3.2	92.9	2.2	547.0	45.0	92.9	2.2	18.3

S1LOYD_100	178	1.038	0.548	0.006	0.0723	0.0006	0.20706	444.1	3.8	449.9	3.5	410.0	15.0	449.9	3.5	1.3
S1LOYD_101	369	23.3	1.667	0.051	0.1658	0.0030	0.93116	994.0	19.0	989.0	16.0	1033.0	30.0	989.0	16.0	0.5
S1LOYD_101	253	1.217	2.879	0.046	0.2384	0.0032	0.8383	1376.0	12.0	1378.0	17.0	1359.0	13.0	1359.0	13.0	1.4
S1LOYD_102	374	2.19	5.930	0.052	0.3620	0.0038	0.81501	1965.1	7.8	1991.0	18.0	1946.0	7.3	1946.0	7.3	2.3
S1LOYD_103	94.2	7.25	1.564	0.045	0.1548	0.0036	0.94862	956.0	17.0	927.0	20.0	1023.0	12.0	927.0	20.0	3.0
S1LOYD_104	470	0.861	0.576	0.007	0.0719	0.0014	0.56453	461.5	4.2	447.5	8.5	525.0	27.0	447.5	8.5	3.0
S1LOYD_105	121.1	0.9081	0.469	0.007	0.0636	0.0006	0.2258	390.1	4.7	397.3	3.7	373.0	20.0	397.3	3.7	1.8
S1LOYD_106	172	0.916	5.203	0.026	0.3458	0.0020	0.5166	1853.0	4.3	1914.5	9.5	1789.2	6.5	1789.2	6.5	7.0
S1LOYD_107	194	1.405	0.104	0.003	0.0152	0.0002	0.09812	100.2	2.4	97.3	1.2	207.0	31.0	97.3	1.2	2.9
S1LOYD_108	124	0.971	1.848	0.020	0.1824	0.0017	0.43598	1063.5	7.0	1080.0	9.3	1025.0	11.0	1080.0	9.3	1.6
S1LOYD_110	380	2.209	0.520	0.011	0.0656	0.0005	0.23262	422.6	5.4	409.9	3.1	513.0	29.0	409.9	3.1	3.0
S1LOYD_111	245	1.02	0.541	0.007	0.0713	0.0006	0.24351	439.4	4.2	444.2	3.5	415.0	16.0	444.2	3.5	1.1
S1LOYD_112	143.2	1.147	0.813	0.010	0.0993	0.0009	0.21141	604.4	5.4	610.1	5.5	597.0	16.0	610.1	5.5	0.9
S1LOYD_113	386.8	2.373	1.638	0.016	0.1635	0.0013	0.77221	984.6	6.0	976.3	7.5	1008.0	11.0	976.3	7.5	0.8
S1LOYD_114	129.1	1.591	4.942	0.041	0.3315	0.0027	0.67755	1809.0	7.0	1847.0	13.0	1780.0	7.5	1780.0	7.5	3.8
S1LOYD_115	112	2.16	1.848	0.039	0.1808	0.0033	0.97304	1055.0	18.0	1071.0	18.0	1040.0	20.0	1071.0	18.0	1.5
S1LOYD_116	227	2.685	1.531	0.012	0.1576	0.0014	0.64557	942.6	4.8	943.1	8.1	950.0	10.0	943.1	8.1	0.1
S1LOYD_117	409	0.961	3.666	0.054	0.2527	0.0034	0.90867	1563.0	12.0	1452.0	18.0	1725.9	7.2	1725.9	7.2	15.9
S1LOYD_118	197	0.698	0.556	0.009	0.0728	0.0008	0.64756	448.8	5.7	452.8	4.8	461.0	19.0	452.8	4.8	0.9
S1LOYD_119	277	1.105	0.100	0.002	0.0152	0.0002	0.1411	96.6	2.0	97.1	1.1	167.0	31.0	97.1	1.1	0.5
S1LOYD_120	268.8	0.919	0.110	0.003	0.0156	0.0002	0.29871	106.2	2.4	100.0	1.4	290.0	30.0	100.0	1.4	5.8
S1LOYD_121	316	2.34	0.462	0.006	0.0618	0.0005	0.43257	385.3	4.1	386.6	3.3	391.0	15.0	386.6	3.3	0.3
S1LOYD_123	119	1.475	0.551	0.009	0.0720	0.0008	0.28796	445.1	5.8	448.3	5.0	439.0	21.0	448.3	5.0	0.7
S1LOYD_124	55	2	0.836	0.016	0.0991	0.0010	0.1979	617.1	8.9	608.9	5.9	645.0	25.0	608.9	5.9	1.3
S1LOYD_125	23.07	1.898	3.983	0.048	0.2830	0.0031	0.15078	1629.9	9.8	1606.0	16.0	1670.0	15.0	1670.0	15.0	3.8
13MARAPOS1_1	153	1.09	4.349	0.048	0.3025	0.0033	0.87046	1705.2	9.2	1703.0	16.0	1706.0	10.0	1706.0	10.0	0.2
13MARAPOS1_2	59.3	1.486	0.939	0.079	0.0853	0.0018	0.95653	673.0	42.0	528.0	11.0	1160.0	150.0	528.0	11.0	21.5
13MARAPOS1_3	220	0.891	0.173	0.004	0.0253	0.0003	0.78315	161.5	3.3	161.3	2.0	185.0	23.0	161.3	2.0	0.1
13MARAPOS1_4	94.5	1.65	6.109	0.035	0.3670	0.0027	0.79344	1992.9	4.9	2017.0	13.0	1964.5	7.3	1964.5	7.3	2.7
13MARAPOS1_5	120.6	1.089	4.511	0.035	0.3066	0.0025	0.85984	1732.6	6.4	1724.0	12.0	1749.4	8.9	1749.4	8.9	1.5
13MARAPOS1_6	135	0.8	1.978	0.033	0.1880	0.0021	0.80283	1107.0	11.0	1110.0	11.0	1099.0	13.0	1110.0	11.0	0.3
13MARAPOS1_7	234	1.455	5.047	0.042	0.3349	0.0025	0.84941	1826.8	7.0	1862.0	12.0	1782.7	6.5	1782.7	6.5	4.4

13MARAPOS1_8	113.6	0.879	2.739	0.022	0.2320	0.0018	0.80028	1338.7	6.1	1344.9	9.5	1325.0	10.0	1325.0	10.0	1.5
13MARAPOS1_9	113	0.41	2.173	0.057	0.1722	0.0036	0.99958	1172.0	18.0	1024.0	20.0	1446.0	22.0	1024.0	20.0	12.6
13MARAPOS1_10	355	3.036	4.873	0.025	0.3276	0.0018	0.81246	1797.5	4.3	1826.6	8.7	1752.9	7.0	1752.9	7.0	4.2
13MARAPOS1_11	73	2.41	12.910	0.310	0.4953	0.0078	0.9794	2670.0	22.0	2597.0	33.0	2731.0	24.0	2731.0	24.0	4.9
13MARAPOS1_13	137	1.203	0.817	0.010	0.0992	0.0009	0.64819	605.9	5.3	609.7	5.2	569.0	14.0	609.7	5.2	0.6
13MARAPOS1_14	236	0.624	0.278	0.004	0.0392	0.0004	0.6914	249.3	3.3	247.6	2.2	253.0	22.0	247.6	2.2	0.7
13MARAPOS1_15	289	9.69	13.240	0.210	0.4907	0.0065	0.98786	2698.0	15.0	2573.0	28.0	2774.5	8.5	2774.5	8.5	7.3
13MARAPOS1_16	325	2.853	4.030	0.049	0.2804	0.0035	0.93184	1640.0	10.0	1595.0	17.0	1680.1	5.4	1680.1	5.4	5.1
13MARAPOS1_17	263	1.128	0.094	0.002	0.0140	0.0002	0.84476	91.2	2.0	89.6	1.2	177.0	30.0	89.6	1.2	1.8
13MARAPOS1_18	268	1.523	3.245	0.025	0.2576	0.0017	0.79341	1467.8	6.0	1477.6	8.9	1433.3	8.7	1433.3	8.7	3.1
13MARAPOS1_19	251	1.834	4.452	0.034	0.3038	0.0022	0.85646	1721.7	6.3	1710.0	11.0	1730.4	7.3	1730.4	7.3	1.2
13MARAPOS1_21	55.5	0.644	4.982	0.046	0.3236	0.0027	0.81919	1817.0	8.0	1807.0	13.0	1827.0	11.0	1827.0	11.0	1.1
13MARAPOS1_22	177	1.54	0.108	0.007	0.0149	0.0003	0.9145	101.7	5.7	95.1	1.8	400.0	130.0	95.1	1.8	6.5
13MARAPOS1_23	85	1.216	5.671	0.040	0.3490	0.0028	0.78083	1926.6	6.1	1930.0	14.0	1911.2	8.1	1911.2	8.1	1.0
13MARAPOS1_24	73.4	1.667	2.411	0.024	0.2126	0.0019	0.74047	1245.5	7.0	1242.0	10.0	1242.0	13.0	1242.0	13.0	0.0
13MARAPOS1_25	207	1.301	3.898	0.027	0.2854	0.0022	0.77178	1612.9	5.6	1618.0	11.0	1598.5	7.8	1598.5	7.8	1.2
13MARAPOS1_26	54.1	0.6489	12.150	0.210	0.4990	0.0051	0.89068	2614.0	15.0	2609.0	22.0	2614.0	24.0	2614.0	24.0	0.2
13MARAPOS1_27	463	43.2	1.575	0.031	0.1588	0.0027	0.92812	960.0	12.0	950.0	15.0	994.0	23.0	950.0	15.0	1.0
13MARAPOS1_27	58.8	1.514	4.563	0.059	0.3038	0.0034	0.89517	1744.0	10.0	1710.0	17.0	1768.0	12.0	1768.0	12.0	3.3
13MARAPOS1_28	260	1.7	4.521	0.056	0.3028	0.0074	0.97858	1734.0	10.0	1704.0	37.0	1741.0	14.0	1741.0	14.0	2.1
13MARAPOS1_29	259	1.578	0.103	0.002	0.0145	0.0001	0.72879	99.2	2.0	92.9	0.9	275.0	33.0	92.9	0.9	6.3
13MARAPOS1_30	332	1.664	0.107	0.002	0.0162	0.0002	0.68137	103.6	2.1	103.3	1.2	159.0	29.0	103.3	1.2	0.3
13MARAPOS1_31	258	4.73	0.110	0.011	0.0142	0.0002	0.98801	104.8	9.2	91.0	1.4	470.0	130.0	91.0	1.4	13.2
13MARAPOS1_32	175.9	1.849	3.183	0.030	0.2555	0.0024	0.68506	1453.9	7.5	1467.0	12.0	1429.3	9.7	1429.3	9.7	2.6
13MARAPOS1_33	213.2	2.111	1.765	0.014	0.1715	0.0010	0.55198	1032.4	5.0	1020.6	5.8	1051.7	9.8	1020.6	5.8	1.1
13MARAPOS1_34	96.1	1.216	6.875	0.048	0.3889	0.0030	0.86706	2095.9	6.0	2117.0	14.0	2072.3	6.7	2072.3	6.7	2.2
13MARAPOS1_35	78.8	1.493	4.818	0.038	0.3240	0.0021	0.78266	1787.6	6.6	1809.0	10.0	1766.8	8.1	1766.8	8.1	2.4
13MARAPOS1_36	120	1.0854	4.317	0.035	0.2940	0.0020	0.79029	1696.2	6.7	1661.2	9.9	1734.8	6.0	1734.8	6.0	4.2
13MARAPOS1_37	363	0.9595	0.562	0.006	0.0728	0.0004	0.4951	452.9	3.9	452.8	2.6	457.0	13.0	452.8	2.6	0.0
13MARAPOS1_38	534	0.5625	3.092	0.036	0.2443	0.0030	0.91466	1430.2	8.9	1409.0	16.0	1470.3	8.0	1470.3	8.0	4.2
13MARAPOS1_39	59.8	0.7989	1.676	0.021	0.1630	0.0015	0.80941	1000.0	7.7	973.1	8.3	1065.0	18.0	973.1	8.3	2.7
13MARAPOS1_40	87	1.928	6.800	0.120	0.3859	0.0059	0.95129	2084.0	15.0	2108.0	29.0	2070.9	8.5	2070.9	8.5	1.8
13MARAPOS1_41	264	1.156	0.535	0.009	0.0705	0.0010	0.8757	435.9	5.5	438.9	6.3	441.0	13.0	438.9	6.3	0.7
13MARAPOS1_42	46.5	1.187	3.344	0.037	0.2601	0.0031	0.92283	1490.6	8.5	1490.0	16.0	1499.0	13.0	1499.0	13.0	0.6
13MARAPOS1_43	193.1	0.905	0.106	0.003	0.0162	0.0002	0.91651	102.1	2.8	103.8	1.5	177.0	29.0	103.8	1.5	1.7

13MARAPOS1_44	220	1.364	0.105	0.002	0.0158	0.0002	0.80961	101.4	2.0	101.1	1.1	204.0	31.0	101.1	1.1	0.3
13MARAPOS1_45	70.8	1.041	5.824	0.038	0.3651	0.0026	0.88942	1949.8	5.7	2008.0	12.0	1899.5	6.6	1899.5	6.6	5.7
13MARAPOS1_46	937	3.51	0.105	0.001	0.0159	0.0002	0.69542	100.9	1.3	101.6	1.3	128.0	18.0	101.6	1.3	0.7
13MARAPOS1_47	439	4.72	5.863	0.037	0.3664	0.0027	0.84559	1955.7	5.4	2012.0	13.0	1911.6	4.7	1911.6	4.7	5.3
13MARAPOS1_48	151.5	0.6164	1.928	0.015	0.1890	0.0013	0.72819	1090.7	5.3	1116.0	7.1	1048.9	9.7	1116.0	7.1	2.3
13MARAPOS1_49	211	1.41	0.106	0.003	0.0161	0.0002	0.77573	101.8	2.4	102.7	1.3	177.0	31.0	102.7	1.3	0.9
13MARAPOS1_50	93.5	1.241	6.801	0.052	0.3867	0.0028	0.85297	2085.5	6.8	2107.0	13.0	2067.1	7.5	2067.1	7.5	1.9
13MARAPOS1_51	770	1.079	0.172	0.004	0.0258	0.0005	0.90283	161.2	3.4	164.0	2.9	166.0	25.0	164.0	2.9	1.7
13MARAPOS1_52	327.6	1.636	0.098	0.002	0.0147	0.0002	0.84404	94.5	2.2	93.9	1.2	156.0	23.0	93.9	1.2	0.6
13MARAPOS1_53	232	1.554	0.112	0.004	0.0170	0.0003	0.87485	108.1	3.4	108.3	2.0	225.0	42.0	108.3	2.0	0.2
13MARAPOS1_54	1250	5.8	0.080	0.002	0.0116	0.0003	0.96375	77.9	1.8	74.5	1.7	221.0	26.0	74.5	1.7	4.4
13MARAPOS1_55	98.9	0.97	4.531	0.048	0.3131	0.0031	0.91341	1735.9	8.9	1758.0	16.0	1733.0	11.0	1733.0	11.0	1.4
13MARAPOS1_56	159	1.819	0.302	0.010	0.0444	0.0007	0.8871	267.3	7.7	280.8	4.4	289.0	37.0	280.8	4.4	5.1
13MARAPOS1_57	112.9	1.601	0.087	0.004	0.0129	0.0003	0.9712	84.3	3.9	82.6	2.0	368.0	67.0	82.6	2.0	2.0
13MARAPOS1_58	12.8	0.633	2.824	0.079	0.1921	0.0047	0.99133	1361.0	20.0	1132.0	25.0	1794.0	46.0	1132.0	25.0	16.8
13MARAPOS1_64	194	1.89	0.102	0.002	0.0149	0.0002	0.044991	98.2	2.1	95.4	1.1	205.0	30.0	95.4	1.1	2.9
13MARAPOS1_65	170	3.11	4.281	0.039	0.2948	0.0025	0.73309	1689.2	7.4	1667.0	12.0	1714.3	6.6	1714.3	6.6	2.8
13MARAPOS1_66	500	5.12	0.777	0.013	0.0929	0.0024	0.6354	583.5	7.7	573.0	14.0	642.0	17.0	573.0	14.0	1.8
13MARAPOS1_67	254.6	0.901	4.399	0.033	0.3019	0.0024	0.71006	1711.9	6.2	1701.0	12.0	1721.1	6.7	1721.1	6.7	1.2
13MARAPOS1_68	132.6	1.65	4.496	0.030	0.3064	0.0020	0.62572	1730.7	5.4	1723.0	10.0	1731.2	6.1	1731.2	6.1	0.5
13MARAPOS1_69	33	0.888	6.588	0.072	0.3667	0.0044	0.53116	2058.3	9.4	2013.0	21.0	2098.0	12.0	2098.0	12.0	4.1
13MARAPOS1_70	94.02	1.619	1.736	0.019	0.1678	0.0012	0.13807	1021.6	6.9	1000.0	6.7	1065.0	13.0	1000.0	6.7	2.1
13MARAPOS1_71	665	1.006	0.093	0.001	0.0142	0.0001	0.17404	90.2	1.1	90.8	0.9	113.0	18.0	90.8	0.9	0.7
13MARAPOS1_72	110	0.663	3.871	0.029	0.2782	0.0021	0.54403	1607.3	6.2	1582.0	11.0	1637.1	9.4	1637.1	9.4	3.4
13MARAPOS1_73	144	1.36	2.143	0.024	0.1919	0.0020	0.61911	1163.4	7.4	1131.0	11.0	1219.0	11.0	1131.0	11.0	2.8
13MARAPOS1_74	69.9	1.963	4.299	0.046	0.3018	0.0029	0.48712	1692.7	8.8	1700.0	15.0	1683.7	8.8	1683.7	8.8	1.0
13MARAPOS1_75	118	1.565	4.326	0.039	0.3018	0.0024	0.65558	1698.0	7.5	1700.0	12.0	1701.7	7.8	1701.7	7.8	0.1
13MARAPOS1_76	142	1.095	4.413	0.035	0.3027	0.0029	0.60156	1714.6	6.5	1704.0	14.0	1720.7	9.6	1720.7	9.6	1.0
13MARAPOS1_77	180	1.072	4.281	0.047	0.2979	0.0029	0.67138	1689.3	9.0	1681.0	15.0	1708.0	11.0	1708.0	11.0	1.6
13MARAPOS1_78	139.8	1.452	4.349	0.031	0.2968	0.0020	0.52457	1702.5	5.8	1675.0	10.0	1733.2	7.5	1733.2	7.5	3.4
13MARAPOS1_79	174.7	1.031	2.735	0.036	0.1942	0.0026	0.74622	1340.0	10.0	1144.0	14.0	1662.7	9.1	1144.0	14.0	14.6
13MARAPOS1_79	110.1	0.893	3.026	0.042	0.2228	0.0022	0.4635	1416.0	10.0	1297.0	11.0	1601.0	14.0	1601.0	14.0	19.0
13MARAPOS1_80	352	2.08	0.090	0.002	0.0138	0.0003	0.33635	87.4	1.9	88.0	1.6	158.0	33.0	88.0	1.6	0.7
13MARAPOS1_81	768	1.411	0.114	0.002	0.0145	0.0002	0.18385	109.6	2.2	92.7	1.0	485.0	46.0	92.7	1.0	15.5
13MARAPOS1_82	204	0.995	0.104	0.002	0.0155	0.0002	0.14859	100.4	2.2	99.0	1.4	218.0	36.0	99.0	1.4	1.4

13MARAPOS1_83	107.6	1.128	0.093	0.004	0.0120	0.0002	0.10034	90.2	3.5	77.0	1.5	486.0	53.0	77.0	1.5	14.6
13MARAPOS1_84	580	0.948	0.097	0.002	0.0146	0.0002	0.24545	94.3	1.7	93.1	1.3	157.0	23.0	93.1	1.3	1.3
13MARAPOS1_85	212.3	0.791	0.116	0.004	0.0156	0.0002	0.062827	111.7	3.4	100.1	1.2	408.0	60.0	100.1	1.2	10.4
13MARAPOS1_86	60	0.4317	12.810	0.100	0.5019	0.0048	0.64012	2665.2	7.7	2625.0	20.0	2689.5	5.9	2689.5	5.9	2.4
13MARAPOS1_87	895	2.82	0.101	0.001	0.0153	0.0001	0.21016	97.4	1.0	97.8	0.9	107.0	15.0	97.8	0.9	0.5
13MARAPOS1_88	277	0.998	0.135	0.008	0.0160	0.0002	0.51091	127.8	6.7	102.5	1.5	646.0	96.0	102.5	1.5	19.8
13MARAPOS1_89	152	0.9	5.608	0.064	0.3456	0.0037	0.85179	1917.8	9.7	1913.0	18.0	1926.9	5.6	1926.9	5.6	0.7
13MARAPOS1_90	73.6	1.26	2.967	0.028	0.2376	0.0019	0.45849	1399.7	7.0	1373.8	9.9	1432.0	10.0	1432.0	10.0	4.1
13MARAPOS1_91	509	1.915	0.098	0.002	0.0150	0.0002	0.32657	95.0	1.9	95.7	1.0	113.0	19.0	95.7	1.0	0.7
13MARAPOS1_92	374.6	1.215	0.095	0.002	0.0144	0.0002	0.08887	91.7	1.4	92.1	1.1	125.0	19.0	92.1	1.1	0.4
13MARAPOS1_93	74.6	2.432	0.821	0.013	0.0999	0.0010	0.38513	608.4	7.0	614.0	5.9	596.0	21.0	614.0	5.9	0.9
13MARAPOS1_94	145.4	1.007	5.338	0.039	0.3375	0.0023	0.67448	1874.5	6.3	1874.0	11.0	1876.3	5.0	1876.3	5.0	0.1
13MARAPOS1_95	370.9	2.421	4.245	0.059	0.2812	0.0037	0.76743	1682.0	11.0	1600.0	19.0	1792.8	9.3	1792.8	9.3	10.8
13MARAPOS1_96	254	1.155	0.098	0.003	0.0145	0.0002	0.29714	94.4	2.3	92.8	1.3	192.0	24.0	92.8	1.3	1.7
13MARAPOS1_97	662	1.002	0.097	0.002	0.0145	0.0002	0.31374	94.2	1.4	92.6	1.1	158.0	16.0	92.6	1.1	1.7
13MARAPOS1_98	53.3	0.946	6.342	0.055	0.3671	0.0028	0.36565	2024.9	7.5	2015.0	13.0	2031.9	9.2	2031.9	9.2	0.8
13MARAPOS1_99	126.1	0.816	4.323	0.033	0.3051	0.0027	0.55707	1697.5	6.3	1716.0	14.0	1687.4	9.1	1687.4	9.1	1.7
13MARAPOS1_100	177.6	0.891	0.509	0.007	0.0667	0.0006	0.43062	417.3	5.0	415.9	3.8	444.0	18.0	415.9	3.8	0.3
13MARAPOS1_101	274	2.81	4.490	0.110	0.3027	0.0069	0.98033	1727.0	20.0	1704.0	34.0	1762.0	4.8	1762.0	4.8	3.3
13MARAPOS1_102	176.5	0.798	3.394	0.021	0.2600	0.0015	0.47633	1502.9	4.9	1489.7	7.8	1534.6	8.1	1534.6	8.1	2.9
13MARAPOS1_103	439	2.119	0.099	0.002	0.0151	0.0002	0.33218	95.9	1.6	96.8	1.0	110.0	20.0	96.8	1.0	0.9
13MARAPOS1_104	1187	2.139	0.094	0.001	0.0143	0.0001	0.32958	91.4	1.1	91.3	0.8	108.0	13.0	91.3	0.8	0.1
13MARAPOS1_105	119.8	1.026	4.874	0.041	0.3158	0.0022	0.21175	1797.5	7.0	1769.0	11.0	1849.0	11.0	1849.0	11.0	4.3
13MARAPOS1_106	162	1.7	0.098	0.004	0.0148	0.0002	0.087192	94.5	3.3	94.8	1.5	219.0	46.0	94.8	1.5	0.3
13MARAPOS1_107	248	1.36	0.097	0.002	0.0149	0.0002	0.31976	93.7	2.1	95.4	1.0	154.0	25.0	95.4	1.0	1.8
13MARAPOS1_108	133.6	1.138	0.101	0.005	0.0143	0.0004	0.18525	97.8	4.5	91.4	2.2	341.0	83.0	91.4	2.2	6.5
13MARAPOS1_109	101.8	1.517	4.624	0.048	0.3064	0.0030	0.58113	1753.1	8.7	1723.0	15.0	1782.3	7.6	1782.3	7.6	3.3
13MARAPOS1_110	252.6	1.11	0.096	0.002	0.0146	0.0002	0.038404	93.2	1.8	93.6	1.4	185.0	32.0	93.6	1.4	0.4
13MARAPOS1_111	524	0.826	0.084	0.001	0.0120	0.0001	0.25653	81.7	1.2	77.2	0.8	130.0	19.0	77.2	0.8	5.5
13MARAPOS1_112	345.1	1.1395	5.077	0.030	0.3271	0.0025	0.34599	1832.2	5.1	1824.0	12.0	1851.0	8.0	1851.0	8.0	1.5
13MARAPOS1_113	97.6	0.5286	0.068	0.003	0.0100	0.0002	0.033912	67.1	2.8	63.9	1.4	215.0	34.0	63.9	1.4	4.8
13MARAPOS1_114	296	1.172	0.101	0.002	0.0148	0.0002	0.16355	98.1	2.1	94.6	1.1	208.0	32.0	94.6	1.1	3.6
13MARAPOS1_115	169	1.308	5.373	0.048	0.3412	0.0034	0.74995	1880.2	7.7	1892.0	16.0	1866.1	9.0	1866.1	9.0	1.4
13MARAPOS1_116	168.7	3.96	3.794	0.035	0.2792	0.0027	0.78274	1591.9	7.5	1587.0	14.0	1597.3	6.8	1597.3	6.8	0.6
13MARAPOS1_117	45.6	0.4996	6.330	0.120	0.3604	0.0056	0.71227	2022.0	17.0	1983.0	27.0	2078.0	17.0	2078.0	17.0	4.6

13MARAPOS1_118	146.6	1.249	4.372	0.036	0.3050	0.0027	0.5505	1706.7	6.7	1716.0	13.0	1708.4	7.7	1708.4	7.7	0.4
13MARAPOS1_119	482	1.509	2.067	0.022	0.1917	0.0019	0.68153	1139.8	6.8	1130.0	10.0	1152.2	9.6	1130.0	10.0	0.9
13MARAPOS1_120	159.5	0.9962	4.623	0.028	0.3154	0.0022	0.51129	1753.2	5.0	1767.0	11.0	1740.5	6.0	1740.5	6.0	1.5
13MARAPOS1_121	81	1.64	2.084	0.022	0.1936	0.0021	0.48662	1144.2	7.4	1140.0	11.0	1156.0	10.0	1140.0	11.0	0.4
13MEEI_1	86.9	1.213	2.232	0.032	0.2063	0.0025	0.56478	1191.0	10.0	1209.0	13.0	1165.0	12.0	1165.0	13.0	1.5
13MEEI_2	185.1	1.08	0.918	0.009	0.1072	0.0010	0.37406	661.8	4.9	656.4	5.6	684.0	12.0	656.4	5.6	0.8
13MEEI_3	141.3	1.41	2.725	0.026	0.2132	0.0026	0.83833	1334.9	7.2	1246.0	14.0	1471.0	10.0	1471.0	10.0	15.3
13MEEI_4	184.7	2.03	13.970	0.140	0.5450	0.0043	0.63216	2746.8	9.8	2804.0	18.0	2700.0	11.0	2700.0	11.0	3.9
13MEEI_5	147.6	0.913	0.091	0.003	0.0137	0.0002	0.080263	88.7	2.3	87.5	1.3	185.0	29.0	87.5	1.3	1.4
13MEEI_6	517	0.884	0.114	0.001	0.0166	0.0001	0.13225	109.6	1.1	106.0	0.8	191.0	16.0	106.0	0.8	3.3
13MEEI_7	660	1.228	0.110	0.003	0.0151	0.0002	0.67462	105.7	2.5	96.5	1.3	314.0	49.0	96.5	1.3	8.7
13MEEI_8	179	0.779	0.188	0.006	0.0259	0.0003	0.31922	174.6	5.3	164.8	1.9	293.0	50.0	164.8	1.9	5.6
13MEEI_9	292	1.474	4.914	0.031	0.3249	0.0026	0.69385	1804.3	5.4	1813.0	12.0	1791.0	6.5	1791.0	6.5	1.2
13MEEI_10	139.9	1.178	0.093	0.003	0.0136	0.0002	0.012775	90.6	2.7	87.1	1.3	201.0	34.0	87.1	1.3	3.9
13MEEI_12	114	1.082	4.630	0.049	0.3201	0.0038	0.51355	1754.0	8.9	1792.0	18.0	1707.0	10.0	1707.0	10.0	5.0
13MEEI_13	54.1	1.065	2.069	0.024	0.1940	0.0019	0.092656	1138.1	7.9	1143.0	10.0	1124.0	13.0	1143.0	10.0	0.4
13MEEI_14	226.9	0.939	0.177	0.004	0.0251	0.0003	0.16414	165.2	3.3	159.6	1.7	250.0	31.0	159.6	1.7	3.4
13MEEI_15	36.5	0.6431	5.582	0.051	0.3467	0.0037	0.58798	1912.7	7.9	1921.0	18.0	1903.0	9.3	1903.0	9.3	0.9
13MEEI_16	507	1.279	0.174	0.002	0.0258	0.0002	0.1927	162.8	2.0	164.2	1.3	142.0	16.0	164.2	1.3	0.9
13MEEI_17	182.1	1.0443	0.091	0.003	0.0136	0.0002	0.060389	87.9	2.4	87.0	1.4	193.0	32.0	87.0	1.4	1.0
13MEEI_18	308.3	2.17	6.830	0.160	0.3572	0.0057	0.83942	2087.0	21.0	1968.0	27.0	2212.0	17.0	2212.0	17.0	11.0
13MEEI_19	32.6	0.3565	1.923	0.028	0.1856	0.0018	0.32742	1089.4	9.5	1098.0	10.0	1064.0	20.0	1098.0	10.0	0.8
13MEEI_20	87.4	0.929	0.094	0.004	0.0135	0.0003	0.3909	91.1	3.5	86.1	1.6	328.0	48.0	86.1	1.6	5.5
13MEEI_21	91.5	0.958	0.883	0.012	0.1040	0.0011	0.28559	642.3	6.5	637.7	6.3	651.0	17.0	637.7	6.3	0.7
13MEEI_22	109	118	0.501	0.010	0.0658	0.0008	0.31436	411.8	6.7	410.7	5.0	432.0	32.0	410.7	5.0	0.3
13MEEI_23	307	5.52	1.950	0.019	0.1894	0.0019	0.69205	1098.9	6.6	1118.0	10.0	1050.8	8.1	1118.0	10.0	1.7
13MEEI_24	120.5	1.142	0.131	0.005	0.0156	0.0003	0.040145	125.0	4.4	100.0	1.6	618.0	73.0	100.0	1.6	20.0
13MEEI_25	235.7	2.794	1.786	0.016	0.1750	0.0015	0.69513	1040.1	5.7	1039.7	8.2	1038.8	7.7	1039.7	8.2	0.0
13MEEI_26	272	1.198	0.105	0.002	0.0158	0.0002	0.2168	101.7	1.4	101.0	1.1	148.0	22.0	101.0	1.1	0.7
13MEEI_27	237	1.048	0.100	0.003	0.0151	0.0002	0.038656	96.7	2.3	96.8	1.1	184.0	45.0	96.8	1.1	0.1
13MEEI_28	144.6	0.9	0.199	0.004	0.0286	0.0004	0.055961	184.0	3.7	181.8	2.3	244.0	30.0	181.8	2.3	1.2
13MEEI_29	76.2	1.582	2.046	0.023	0.1876	0.0018	0.58581	1130.4	7.7	1108.1	9.8	1157.0	11.0	1108.1	9.8	2.0
13MEEI_30	105.1	1.667	4.413	0.034	0.3131	0.0032	0.60179	1714.5	6.4	1756.0	16.0	1660.5	8.1	1660.5	8.1	5.8
13MEEI_31	68.7	1.316	0.133	0.022	0.0152	0.0006	0.068682	126.0	18.0	97.5	4.1	980.0	220.0	97.5	4.1	22.6

13MEEI_31	718	10.1	3.991	0.085	0.2845	0.0053	0.96391	1631.0	17.0	1613.0	27.0	1652.0	8.9	1652.0	8.9	2.4
13MEEI_32	203	1.155	0.185	0.003	0.0274	0.0003	0.13218	172.5	2.2	174.1	1.8	142.0	21.0	174.1	1.8	0.9
13MEEI_33	183	1.694	0.098	0.003	0.0147	0.0002	0.065699	94.9	2.3	93.9	1.1	179.0	42.0	93.9	1.1	1.1
13MEEI_34	37.5	0.5197	1.903	0.024	0.1868	0.0016	0.25599	1081.7	8.4	1104.0	8.9	1037.0	16.0	1104.0	8.9	2.1
13MEEI_35	629	6.429	0.646	0.016	0.0696	0.0012	0.11562	504.9	9.4	434.5	7.2	836.0	56.0	434.5	7.2	13.9
13MEEI_36	127.6	0.6346	13.690	0.170	0.5318	0.0067	0.89532	2727.0	12.0	2751.0	28.0	2709.7	4.6	2709.7	4.6	1.5
13MEEI_37	295	1.073	3.296	0.097	0.2643	0.0051	0.92558	1479.0	23.0	1511.0	26.0	1435.0	20.0	1435.0	20.0	5.3
13MEEI_38	617	0.82	0.115	0.002	0.0163	0.0001	0.054231	110.7	1.3	104.4	0.9	258.0	25.0	104.4	0.9	5.7
13MEEI_39	78.1	1.5	4.604	0.033	0.3230	0.0022	0.59379	1749.7	5.9	1804.0	11.0	1675.7	6.5	1675.7	6.5	7.7
13MEEI_40	279.8	1.103	0.101	0.003	0.0154	0.0002	0.43695	97.6	2.3	98.2	1.2	193.0	43.0	98.2	1.2	0.6
13MEEI_41	85	0.821	0.095	0.004	0.0142	0.0003	0.11096	92.3	3.5	90.6	1.8	268.0	51.0	90.6	1.8	1.8
13MEEI_42	70.3	0.921	0.118	0.007	0.0157	0.0003	0.16286	113.1	6.5	100.6	1.9	530.0	110.0	100.6	1.9	11.1
13MEEI_44	1057	1.544	0.098	0.001	0.0146	0.0001	0.087769	94.9	1.3	93.5	0.9	133.0	21.0	93.5	0.9	1.5
13MEEI_45	91.9	0.872	2.498	0.020	0.2202	0.0018	0.46731	1272.0	5.9	1282.6	9.3	1241.0	13.0	1241.0	13.0	3.4
13MEEI_46	129.3	1.524	0.360	0.019	0.0489	0.0023	0.935	310.0	14.0	308.0	14.0	336.0	19.0	308.0	14.0	0.6
13MEEI_47	519	2.69	1.850	0.022	0.1774	0.0021	0.92356	1063.0	8.0	1052.0	12.0	1088.1	6.9	1052.0	12.0	1.0
13MEEI_48	170	1.861	0.089	0.002	0.0135	0.0002	0.21074	86.1	1.9	86.2	1.1	160.0	33.0	86.2	1.1	0.1
13MEEI_49	77.8	1.411	4.960	0.067	0.3312	0.0044	0.70102	1814.0	11.0	1844.0	21.0	1778.0	12.0	1778.0	12.0	3.7
13MEEI_50	426	4.95	2.943	0.021	0.2339	0.0025	0.76154	1392.8	5.3	1355.0	13.0	1451.0	8.8	1451.0	8.8	6.6
13MEEI_51	79	1.19	4.579	0.035	0.3189	0.0030	0.45918	1745.1	6.4	1784.0	15.0	1695.2	8.4	1695.2	8.4	5.2
13MEEI_52	168.8	1.892	4.787	0.036	0.3293	0.0030	0.64237	1782.4	6.4	1835.0	14.0	1717.8	7.4	1717.8	7.4	6.8
13MEEI_53	130	2.677	5.170	0.035	0.3413	0.0026	0.63173	1848.2	5.8	1893.0	12.0	1795.6	7.6	1795.6	7.6	5.4
13MEEI_54	358	1.33	0.118	0.002	0.0178	0.0002	0.084486	113.4	2.1	113.7	1.1	147.0	37.0	113.7	1.1	0.3
13MEEI_55	83.4	0.936	0.096	0.004	0.0145	0.0003	0.023575	92.9	3.8	92.8	1.6	235.0	40.0	92.8	1.6	0.1
13MEEI_56	439.8	1.236	4.952	0.032	0.3283	0.0025	0.84176	1810.8	5.5	1830.0	12.0	1781.2	5.9	1781.2	5.9	2.7
13MEEI_57	213	1.43	5.226	0.043	0.3504	0.0032	0.79542	1857.3	7.2	1936.0	15.0	1766.7	5.9	1766.7	5.9	9.6
13MEEI_59	222.4	1.45	0.101	0.002	0.0152	0.0002	0.012935	97.2	1.9	97.1	1.1	165.0	22.0	97.1	1.1	0.1
13MEEI_60	431	1.738	2.477	0.026	0.2089	0.0021	0.83791	1265.0	7.6	1223.0	11.0	1344.7	5.3	1344.7	5.3	9.1
13MEEI_61	147	1.133	0.101	0.003	0.0142	0.0002	0.022935	97.6	2.5	90.8	1.3	311.0	33.0	90.8	1.3	7.0
13MEEI_62	246	1.263	0.108	0.002	0.0161	0.0002	0.028769	103.7	1.6	102.7	1.2	168.0	25.0	102.7	1.2	1.0
13MEEI_63	115.8	1.751	4.881	0.033	0.3299	0.0021	0.66111	1799.4	5.5	1838.0	10.0	1747.2	6.0	1747.2	6.0	5.2
13MEEI_64	90.3	1.264	2.025	0.018	0.1933	0.0013	0.46577	1124.4	6.3	1139.2	7.3	1094.9	7.8	1139.2	7.3	1.3
13MEEI_65	95.9	1.323	2.061	0.028	0.1952	0.0035	0.63236	1135.8	9.2	1153.0	18.0	1098.0	15.0	1153.0	18.0	1.5
13MEEI_66	110.9	2.035	1.880	0.017	0.1841	0.0015	0.42057	1074.6	5.7	1089.2	8.1	1032.0	12.0	1089.2	8.1	1.4
13MEEI_67	233.2	1.024	0.516	0.005	0.0684	0.0006	0.2971	422.2	3.0	426.5	3.5	396.0	11.0	426.5	3.5	1.0

13MEEI_68	263	2.39	0.681	0.008	0.0849	0.0008	0.33875	527.4	4.8	525.4	4.5	547.0	14.0	525.4	4.5	0.4
13MEEI_69	170	2.312	5.000	0.035	0.3484	0.0031	0.66574	1820.2	5.6	1927.0	15.0	1695.2	5.9	1695.2	5.9	13.7
13MEEI_70	51.2	0.8571	5.582	0.046	0.3607	0.0026	0.56395	1912.8	7.2	1985.0	13.0	1832.7	7.5	1832.7	7.5	8.3
13MEEI_71	228.7	0.9756	4.438	0.021	0.3173	0.0017	0.63605	1719.9	4.0	1776.5	8.3	1652.6	4.6	1652.6	4.6	7.5
13MEEI_72	2430	1.673	0.179	0.004	0.0132	0.0007	0.22574	167.2	3.1	84.4	4.5	1650.0	120.0	DISC	DISC	94.9
13MEEI_73	81.2	2.28	2.749	0.075	0.2157	0.0055	0.93732	1339.0	20.0	1258.0	29.0	1464.9	9.8	1464.9	9.8	14.1
13MEEI_74	315	1.463	0.120	0.002	0.0172	0.0002	0.16326	115.4	1.7	109.8	1.2	226.0	23.0	109.8	1.2	4.9
13MEEI_75	4.587	0.474	6.230	0.180	0.0739	0.0026	0.23916	2010.0	26.0	459.0	16.0	4556.0	32.0	DISC	DISC	89.9
13MEEI_76	128.1	2.047	3.811	0.032	0.2712	0.0022	0.80039	1594.6	6.7	1547.0	11.0	1663.6	4.9	1663.6	4.9	7.0
13MEEI_77	61.7	0.607	3.503	0.032	0.2746	0.0024	0.44739	1527.3	7.1	1564.0	12.0	1493.0	11.0	1493.0	11.0	4.8
13MEEI_78	104.5	0.905	0.106	0.005	0.0145	0.0003	0.14865	102.4	4.9	93.2	1.8	441.0	70.0	93.2	1.8	9.0
13MEEI_79	81	0.575	2.867	0.028	0.2370	0.0020	0.41838	1372.8	7.4	1371.0	11.0	1378.7	9.7	1378.7	9.7	0.6
13MEEI_80	97.2	0.983	2.693	0.022	0.2286	0.0018	0.61716	1326.2	6.1	1326.9	9.4	1326.3	8.2	1326.3	8.2	0.0
13MEEI_81	93.7	0.584	0.097	0.005	0.0139	0.0003	0.33869	93.8	4.9	89.2	2.0	380.0	110.0	89.2	2.0	4.9
13MEEI_82	700	0.832	0.109	0.002	0.0164	0.0002	0.54856	104.7	1.9	104.6	1.5	119.0	21.0	104.6	1.5	0.1
13MEEI_83	315.9	1.394	0.096	0.002	0.0143	0.0002	0.20945	92.9	1.5	91.7	1.1	136.0	21.0	91.7	1.1	1.3
13MEEI_84	426	2.479	0.152	0.051	0.0160	0.0003	0.22646	141.0	40.0	102.4	1.6	1110.0	380.0	102.4	1.6	27.4
13MEEI_85	138.3	1.246	0.099	0.003	0.0150	0.0002	0.15684	96.5	2.7	96.1	1.4	201.0	35.0	96.1	1.4	0.4
13MEEI_86	112.8	0.945	4.314	0.031	0.3035	0.0028	0.82643	1695.8	6.0	1709.0	14.0	1674.3	6.2	1674.3	6.2	2.1
13MEEI_87	40.4	0.995	5.110	0.040	0.3366	0.0027	0.6103	1837.4	6.6	1870.0	13.0	1802.9	7.2	1802.9	7.2	3.7
13MEEI_88	38.5	0.8287	2.293	0.028	0.2099	0.0026	0.4706	1209.5	8.7	1228.0	14.0	1175.0	13.0	1175.0	14.0	1.5
13MEEI_90	139.5	1.175	4.806	0.043	0.3206	0.0019	0.43767	1785.4	7.5	1792.5	9.3	1780.0	12.0	1780.0	12.0	0.7
13MEEI_91	150	3.2	0.529	0.008	0.0700	0.0006	0.17463	430.7	5.2	436.8	3.7	396.0	22.0	436.8	3.7	1.4
13MEEI_92	108.4	1.179	5.072	0.036	0.3367	0.0031	0.80199	1831.1	6.1	1871.0	15.0	1787.0	6.2	1787.0	6.2	4.7
13MEEI_93	125.7	1.692	2.794	0.018	0.2426	0.0017	0.5727	1353.6	4.7	1399.9	8.6	1283.2	8.3	1283.2	8.3	9.1
13MEEI_94	134.7	1.657	3.546	0.028	0.2759	0.0019	0.51197	1538.7	6.1	1570.4	9.7	1495.7	8.1	1495.7	8.1	5.0
13MEEI_95	536	1.222	0.095	0.001	0.0141	0.0001	0.15771	92.4	1.0	90.3	0.9	148.0	19.0	90.3	0.9	2.3
13MEEI_96	449	1.082	0.143	0.006	0.0161	0.0003	0.089252	135.9	5.1	103.2	1.7	735.0	71.0	103.2	1.7	24.1
13MEEI_97	896	4.07	0.408	0.007	0.0441	0.0007	0.76306	347.6	5.3	278.1	4.5	813.0	27.0	278.1	4.5	20.0
13MEEI_98	174.2	1.316	6.968	0.076	0.3756	0.0040	0.86394	2106.5	9.8	2055.0	19.0	2150.9	6.6	2150.9	6.6	4.5
13MEEI_99	196	0.4939	2.969	0.035	0.2305	0.0021	0.79327	1400.0	9.0	1337.0	11.0	1486.0	11.0	1486.0	11.0	10.0
13MEEI_100	249.5	1.702	3.900	0.071	0.2606	0.0035	0.85632	1612.0	15.0	1492.0	18.0	1773.0	15.0	1773.0	15.0	15.8
13MEEI_101	63	1.025	3.162	0.037	0.2516	0.0027	0.48475	1447.1	9.0	1446.0	14.0	1438.0	12.0	1438.0	12.0	0.6
13MEEI_102	523	2.552	4.617	0.040	0.3165	0.0029	0.85884	1751.9	7.3	1773.0	14.0	1734.7	5.4	1734.7	5.4	2.2
13MEEI_103	165	0.966	4.191	0.059	0.2978	0.0048	0.89884	1671.0	12.0	1679.0	24.0	1651.8	6.3	1651.8	6.3	1.6

13MEEI_104	68.3	0.558	11.210	0.130	0.4684	0.0046	0.88453	2541.0	11.0	2476.0	20.0	2594.3	6.5	2594.3	6.5	4.6
13MEEI_105	124	1.49	3.668	0.038	0.2814	0.0029	0.92941	1561.9	9.2	1598.0	15.0	1521.5	9.6	1521.5	9.6	5.0
13MEEI_106	32.63	1.08	4.750	0.140	0.2932	0.0039	0.68184	1783.0	24.0	1657.0	19.0	1926.0	32.0	1926.0	32.0	14.0
13MEEI_107	44.9	0.716	10.920	0.150	0.4343	0.0056	0.73849	2515.0	13.0	2325.0	25.0	2675.3	6.8	2675.3	6.8	13.1
13MEEI_108	228.1	0.9661	5.043	0.032	0.3160	0.0020	0.54096	1826.3	5.3	1770.2	9.8	1889.1	7.7	1889.1	7.7	6.3
13MEEI_109	188.4	0.8829	3.929	0.020	0.2819	0.0018	0.44876	1619.5	4.1	1600.8	9.1	1647.3	6.9	1647.3	6.9	2.8
13MEEI_110	75	1.579	0.193	0.005	0.0278	0.0004	0.025423	179.3	3.9	176.8	2.4	253.0	36.0	176.8	2.4	1.4
13MEEI_111	227.7	1.398	3.264	0.020	0.2629	0.0019	0.8302	1472.4	4.7	1504.3	9.6	1430.3	6.9	1430.3	6.9	5.2
13MEEI_112	195	2.74	2.758	0.024	0.2328	0.0018	0.66924	1344.0	6.4	1349.0	9.5	1337.0	10.0	1337.0	10.0	0.9
13MEEI_113	517	5.24	2.624	0.012	0.2236	0.0015	0.5956	1307.3	3.5	1300.8	7.8	1322.3	7.2	1322.3	7.2	1.6
13MEEI_114	557	42.6	0.518	0.011	0.0671	0.0016	0.94401	423.3	7.4	418.9	9.5	461.0	14.0	418.9	9.5	1.0
13MEEI_116	23.7	0.6882	6.841	0.088	0.3861	0.0051	0.69599	2092.0	11.0	2104.0	24.0	2068.0	10.0	2068.0	10.0	1.7
13MEEI_117	165.6	1.431	4.625	0.028	0.3229	0.0021	0.71997	1754.4	5.2	1804.0	10.0	1697.3	5.1	1697.3	5.1	6.3
13MEEI_118	159	0.863	1.912	0.033	0.1614	0.0027	0.9793	1084.0	12.0	964.0	15.0	1335.0	12.0	964.0	15.0	11.1
13MEEI_119	98.1	1.242	3.281	0.021	0.2639	0.0016	0.39939	1476.3	5.0	1509.4	8.4	1432.8	6.4	1432.8	6.4	5.3
13MEEI_120	73.5	8.74	1.573	0.037	0.1350	0.0023	0.92237	808.0	13.0	794.0	13.0	868.0	13.0	794.0	13.0	1.7
CastlegateCo_1	277	1.53	0.527	0.009	0.0689	0.0009	0.14775	429.5	5.7	429.3	5.2	437.0	46.0	429.3	5.2	0.0
CastlegateCO_2	702	32	0.580	0.020	0.0758	0.0033	0.48678	464.0	13.0	471.0	19.0	504.0	84.0	471.0	19.0	1.5
CastlegateCO_2	168	2.64	2.970	0.096	0.2338	0.0061	0.72895	1398.0	24.0	1354.0	32.0	1475.0	45.0	1475.0	45.0	8.2
CastlegateCO_3	576	1.764	0.101	0.003	0.0149	0.0004	0.38519	97.3	2.9	95.2	2.4	146.0	73.0	95.2	2.4	2.2
CastlegateCO_4	132.6	0.9149	5.117	0.044	0.3300	0.0030	0.55202	1838.3	7.4	1840.0	15.0	1842.0	16.0	1842.0	16.0	0.1
CastlegateCO_5	349.9	3.103	2.567	0.054	0.2131	0.0050	0.69843	1290.0	16.0	1245.0	27.0	1365.0	36.0	1365.0	36.0	8.8
CastlegateCO_6	719	8.46	0.543	0.006	0.0714	0.0006	0.31199	439.9	3.6	444.5	3.6	426.0	25.0	444.5	3.6	1.0
CastlegateCO_7	79.4	0.3896	12.300	0.230	0.4779	0.0085	0.70865	2626.0	17.0	2517.0	37.0	2703.0	20.0	2703.0	20.0	6.9
CastlegateCO_8	202.2	2.125	4.028	0.037	0.2937	0.0028	0.68233	1639.3	7.6	1660.0	14.0	1633.0	15.0	1633.0	15.0	1.7
CastlegateCO_9	225	1.275	0.549	0.010	0.0713	0.0010	0.42163	444.0	6.4	443.9	5.8	462.0	37.0	443.9	5.8	0.0
CastlegateCO_10	85.1	2.317	1.720	0.036	0.1723	0.0030	0.40635	1016.0	14.0	1026.0	16.0	994.0	40.0	1026.0	16.0	1.0
CastlegateCO_11	270.9	9.12	12.980	0.190	0.4919	0.0080	0.88601	2676.0	14.0	2582.0	35.0	2760.0	11.0	2760.0	11.0	6.4
CastlegateCO_12	361.4	3.588	4.691	0.041	0.3050	0.0030	0.77931	1765.1	7.2	1716.0	15.0	1834.0	11.0	1834.0	11.0	6.4
CastlegateCO_13	195	1.782	1.713	0.022	0.1702	0.0019	0.39271	1012.7	8.4	1013.0	11.0	1027.0	27.0	1013.0	11.0	0.0
CastlegateCO_14	129.1	2.684	3.972	0.052	0.2779	0.0036	0.56215	1627.0	11.0	1580.0	18.0	1690.0	26.0	1690.0	26.0	6.5
CastlegateCO_15	101.3	0.96	5.279	0.073	0.3421	0.0048	0.51605	1865.0	12.0	1896.0	23.0	1858.0	25.0	1858.0	25.0	2.0
CastlegateCO_16	470	2.329	1.641	0.042	0.1689	0.0049	0.76054	986.0	16.0	1005.0	27.0	999.0	35.0	1005.0	27.0	1.9

CastlegateCO_17	101.5	2.308	1.936	0.043	0.1813	0.0042	0.50146	1096.0	15.0	1073.0	23.0	1139.0	46.0	1073.0	23.0	2.1
CastlegateCO_18	280	1.428	3.183	0.030	0.2519	0.0023	0.56436	1452.5	7.3	1448.0	12.0	1465.0	17.0	1465.0	17.0	1.2
CastlegateCO_19	122.5	1.609	18.060	0.210	0.5928	0.0088	0.61864	2993.0	12.0	2999.0	36.0	2996.0	19.0	2996.0	19.0	0.1
CastlegateCO_20	213	3.09	1.899	0.028	0.1820	0.0023	0.31194	1079.9	9.7	1078.0	12.0	1094.0	26.0	1078.0	12.0	0.2
CastlegateCO_21	211	4.11	2.254	0.046	0.1960	0.0043	0.48803	1198.0	14.0	1153.0	23.0	1261.0	38.0	1153.0	23.0	3.8
CastlegateCO_22	37.9	1.018	5.624	0.069	0.3439	0.0039	0.070658	1919.0	11.0	1907.0	19.0	1934.0	31.0	1934.0	31.0	1.4
CastlegateCO_23	375	1.781	0.567	0.010	0.0732	0.0009	0.27855	455.4	6.3	455.1	5.4	474.0	39.0	455.1	5.4	0.1
CastlegateCO_24	249	3.67	4.513	0.042	0.3070	0.0033	0.70337	1733.9	7.9	1725.0	16.0	1747.0	15.0	1747.0	15.0	1.3
CastlegateCO_25	89.3	0.804	2.000	0.110	0.1586	0.0032	0.095731	1109.0	35.0	948.0	18.0	1420.0	110.0	948.0	18.0	14.5
CastlegateCO_27	131.3	1.359	5.526	0.058	0.3379	0.0032	0.56405	1906.2	9.0	1876.0	15.0	1934.0	17.0	1934.0	17.0	3.0
CastlegateCO_28	77.9	1.696	0.658	0.017	0.0818	0.0014	0.21694	514.1	9.8	506.7	8.6	543.0	64.0	506.7	8.6	1.4
CastlegateCO_29	187.6	2.53	14.340	0.140	0.5327	0.0055	0.65559	2771.9	9.1	2752.0	23.0	2789.0	14.0	2789.0	14.0	1.3
CastlegateCO_30	67.2	3.52	3.241	0.065	0.2522	0.0035	0.4015	1469.0	16.0	1449.0	18.0	1497.0	36.0	1497.0	36.0	3.2
CastlegateCO_31	256.2	1.494	0.439	0.010	0.0584	0.0007	0.33075	371.1	7.1	366.1	4.3	393.0	49.0	366.1	4.3	1.3
CastlegateCO_32	35.9	0.572	11.640	0.150	0.4880	0.0070	0.35654	2575.0	12.0	2561.0	30.0	2586.0	24.0	2586.0	24.0	1.0
CastlegateCO_33	87	1.37	3.170	0.037	0.2549	0.0035	0.47161	1449.2	9.0	1463.0	18.0	1438.0	25.0	1438.0	25.0	1.7
CastlegateCO_35	105.9	0.722	4.016	0.071	0.2892	0.0048	0.14174	1636.0	14.0	1637.0	24.0	1630.0	32.0	1630.0	32.0	0.4
CastlegateCO_36	184	1.49	4.095	0.066	0.2912	0.0064	0.734	1652.0	13.0	1646.0	32.0	1665.0	29.0	1665.0	29.0	1.1
CastlegateCO_37	233	4.56	3.770	0.085	0.2728	0.0056	0.89676	1584.0	18.0	1554.0	28.0	1630.0	19.0	1630.0	19.0	4.7
CastlegateCO_38	514	1.722	3.949	0.035	0.2826	0.0026	0.67277	1623.4	7.2	1604.0	13.0	1650.0	14.0	1650.0	14.0	2.8
CastlegateCO_39	525	1.087	0.729	0.011	0.0906	0.0015	0.50124	555.8	6.6	558.9	8.6	579.0	38.0	558.9	8.6	0.6
CastlegateCO_40	622	1.645	0.496	0.011	0.0619	0.0013	0.8077	408.4	7.3	386.9	7.9	534.0	39.0	386.9	7.9	5.3
CastlegateCO_41	136	1.565	3.887	0.072	0.2830	0.0077	0.71764	1612.0	16.0	1604.0	39.0	1629.0	35.0	1629.0	35.0	1.5
CastlegateCO_42	103.7	1.728	3.655	0.049	0.2681	0.0028	0.41833	1561.0	11.0	1533.0	15.0	1586.0	24.0	1586.0	24.0	3.3
CastlegateCO_43	184	3.34	1.827	0.036	0.1780	0.0025	0.074097	1053.0	13.0	1057.0	14.0	1058.0	37.0	1057.0	14.0	0.4
CastlegateCO_44	533	1.953	3.406	0.033	0.2611	0.0033	0.6583	1505.5	7.6	1497.0	16.0	1513.0	17.0	1513.0	17.0	1.1
CastlegateCO_45	632	1.937	4.450	0.042	0.2921	0.0030	0.76487	1721.1	7.8	1652.0	15.0	1801.0	13.0	1801.0	13.0	8.3
CastlegateCO_46	484	1.398	0.825	0.011	0.0980	0.0011	0.26951	611.2	5.9	602.8	6.5	636.0	26.0	602.8	6.5	1.4
CastlegateCO_47	93.4	1.381	2.276	0.041	0.2025	0.0038	0.55959	1203.0	13.0	1188.0	20.0	1237.0	31.0	1188.0	20.0	1.2
CastlegateCO_49	253	4.41	3.109	0.043	0.2496	0.0038	0.74855	1434.0	11.0	1436.0	20.0	1451.0	19.0	1451.0	19.0	1.0
CastlegateCO_50	142.3	2.733	2.890	0.040	0.2326	0.0036	0.38637	1378.0	10.0	1348.0	19.0	1422.0	30.0	1422.0	30.0	5.2
CastlegateCO_51	216.1	0.885	0.857	0.013	0.1022	0.0013	0.36186	628.8	7.4	627.4	7.4	621.0	37.0	627.4	7.4	0.2
CastlegateCO_52	119.6	1.968	2.437	0.035	0.2143	0.0024	0.62172	1255.0	11.0	1252.0	13.0	1257.0	24.0	1257.0	24.0	0.4
CastlegateCO_53	48.8	1.131	2.549	0.050	0.2222	0.0031	0.44833	1284.0	14.0	1293.0	16.0	1280.0	43.0	1280.0	43.0	1.0
CastlegateCO_54	59	1.717	1.996	0.043	0.1885	0.0035	0.48895	1114.0	15.0	1112.0	19.0	1125.0	42.0	1112.0	19.0	0.2

CastlegateCO_55	468	2.89	3.490	0.047	0.2666	0.0035	0.69781	1524.0	10.0	1523.0	18.0	1528.0	21.0	1528.0	21.0	0.3
CastlegateCO_56	834	2.37	0.104	0.002	0.0154	0.0002	0.05242	100.5	2.1	98.2	1.4	149.0	54.0	98.2	1.4	2.3
CastlegateCO_57	231	1.822	0.079	0.004	0.0119	0.0003	0.085303	76.8	4.0	76.2	1.9	160.0	110.0	76.2	1.9	0.8
CastlegateCO_58	282	2.551	3.198	0.042	0.2552	0.0040	0.72586	1456.0	10.0	1464.0	20.0	1454.0	21.0	1454.0	21.0	0.7
CastlegateCO_59	79.3	1.975	2.714	0.066	0.2334	0.0050	0.57493	1336.0	19.0	1352.0	26.0	1318.0	38.0	1318.0	38.0	2.6
CastlegateCO_60	158.1	0.889	1.227	0.030	0.1296	0.0027	0.51577	812.0	14.0	785.0	16.0	897.0	49.0	785.0	16.0	3.3
CastlegateCO_61	242	7.67	1.962	0.022	0.1863	0.0018	0.53064	1102.9	7.3	1101.1	9.5	1103.0	21.0	1101.1	9.5	0.2
CastlegateCO_62	184.9	1.266	4.588	0.095	0.2015	0.0044	0.5389	1745.0	17.0	1183.0	24.0	2513.0	33.0	DISC	DISC	32.2
CastlegateCO_63	82.4	2.56	4.651	0.068	0.3140	0.0043	0.47022	1760.0	13.0	1760.0	21.0	1765.0	27.0	1765.0	27.0	0.3
CastlegateCO_64	190.3	0.889	0.545	0.012	0.0703	0.0008	0.13478	441.3	7.7	437.8	4.7	453.0	54.0	437.8	4.7	0.8
CastlegateCO_65	207.2	25.6	0.517	0.015	0.0663	0.0019	0.27592	424.0	10.0	414.0	12.0	435.0	80.0	414.0	12.0	2.4
CastlegateCO_66	210	2.013	2.011	0.028	0.1868	0.0020	0.7551	1118.3	9.4	1104.0	11.0	1154.0	25.0	1104.0	11.0	1.3
CastlegateCO_67	127.2	1.221	4.545	0.050	0.3076	0.0034	0.74516	1738.5	9.1	1729.0	17.0	1747.0	15.0	1747.0	15.0	1.0
CastlegateCO_68	115	1.373	1.854	0.031	0.1780	0.0026	0.26853	1064.0	11.0	1056.0	14.0	1083.0	41.0	1056.0	14.0	0.8
CastlegateCO_69	277	31.8	0.363	0.010	0.0492	0.0010	0.25481	314.4	7.6	309.6	5.9	330.0	66.0	309.6	5.9	1.5
CastlegateCO_70	198	1.005	0.481	0.010	0.0637	0.0010	0.21454	399.3	6.7	397.9	5.8	380.0	52.0	397.9	5.8	0.4
CastlegateCO_71	322	2.75	1.892	0.024	0.1778	0.0024	0.63121	1077.7	8.4	1055.0	13.0	1124.0	25.0	1055.0	13.0	2.1
CastlegateCO_72	703	5.95	1.869	0.020	0.1782	0.0016	0.69086	1069.6	7.1	1057.1	8.9	1096.0	17.0	1057.1	8.9	1.2
CastlegateCO_73	47.34	1.189	3.688	0.083	0.2649	0.0054	0.43023	1567.0	18.0	1514.0	28.0	1644.0	42.0	1644.0	42.0	7.9
CastlegateCO_74	337	2.413	0.106	0.003	0.0162	0.0004	0.21055	102.4	2.6	103.4	2.2	108.0	63.0	103.4	2.2	1.0
CastlegateCO_75	275	7.08	3.700	0.076	0.2719	0.0059	0.79128	1569.0	17.0	1549.0	30.0	1614.0	25.0	1614.0	25.0	4.0
CastlegateCO_76	110.8	2.48	2.044	0.032	0.1937	0.0026	0.37017	1129.0	11.0	1141.0	14.0	1116.0	32.0	1141.0	14.0	1.1
CastlegateCO_77	111.1	1.343	0.794	0.018	0.0959	0.0014	0.1824	593.0	10.0	590.4	8.2	588.0	52.0	590.4	8.2	0.4
CastlegateCO_78	192	1.793	2.742	0.039	0.2328	0.0029	0.68449	1339.0	11.0	1349.0	15.0	1354.0	21.0	1354.0	21.0	0.4
CastlegateCO_80	372	1.739	4.215	0.049	0.2990	0.0042	0.81805	1676.3	9.5	1686.0	21.0	1673.0	15.0	1673.0	15.0	0.8
CastlegateCO_81	267	4.97	3.087	0.031	0.2487	0.0027	0.54242	1428.9	7.6	1431.0	14.0	1440.0	18.0	1440.0	18.0	0.6
CastlegateCO_82	400	0.941	1.984	0.040	0.1874	0.0040	0.6681	1110.0	13.0	1107.0	22.0	1114.0	32.0	1107.0	22.0	0.3
CastlegateCO_83	105.9	1.63	5.116	0.071	0.3242	0.0051	0.74039	1837.0	12.0	1809.0	25.0	1881.0	24.0	1881.0	24.0	3.8
CastlegateCO_84	297	2.33	0.443	0.012	0.0567	0.0015	0.64878	371.7	8.5	355.4	9.2	470.0	55.0	355.4	9.2	4.4
CastlegateCO_85	333	2.42	1.601	0.029	0.1628	0.0030	0.70055	971.0	12.0	972.0	17.0	999.0	28.0	972.0	17.0	0.1
CastlegateCO_86	31.92	1.626	1.958	0.048	0.1834	0.0038	0.28185	1101.0	16.0	1085.0	21.0	1156.0	59.0	1085.0	21.0	1.5
CastlegateCO_87	268.1	1.168	0.550	0.100	0.0508	0.0011	0.82633	418.0	52.0	319.1	6.8	830.0	210.0	319.1	6.8	23.7
CastlegateCO_88	415	1.383	0.751	0.010	0.0821	0.0018	0.24568	568.4	5.5	508.0	11.0	816.0	51.0	508.0	11.0	10.6
CastlegateCO_89	678	2.82	2.759	0.030	0.2310	0.0033	0.66524	1344.0	8.1	1339.0	17.0	1359.0	19.0	1359.0	19.0	1.5
CastlegateCO_90	278	0.921	4.367	0.060	0.2956	0.0044	0.59924	1707.0	12.0	1669.0	22.0	1755.0	26.0	1755.0	26.0	4.9

CastlegateCO_91	97.3	1.652	11.400	0.240	0.4380	0.0110	0.83082	2554.0	19.0	2337.0	50.0	2735.0	21.0	2735.0	21.0	14.6
CastlegateCO_92	448	1.9	9.620	0.140	0.4279	0.0078	0.84765	2398.0	14.0	2295.0	35.0	2484.0	19.0	2484.0	19.0	7.6
CastlegateCO_92	359.3	1.183	11.260	0.150	0.4849	0.0074	0.68619	2544.0	13.0	2548.0	32.0	2527.0	23.0	2527.0	23.0	0.8
CastlegateCO_93	151.5	1.435	1.905	0.023	0.1820	0.0025	0.27566	1082.3	8.2	1078.0	14.0	1081.0	32.0	1078.0	14.0	0.4
CastlegateCO_94	222	2.238	1.902	0.023	0.1811	0.0028	0.51884	1081.3	8.2	1073.0	15.0	1098.0	26.0	1073.0	15.0	0.8
CastlegateCO_95	117.3	1.398	0.827	0.034	0.0887	0.0024	0.17276	611.0	18.0	547.0	14.0	847.0	95.0	547.0	14.0	10.5
CastlegateCO_96	139.6	1.655	4.358	0.085	0.2988	0.0053	0.70578	1703.0	16.0	1688.0	27.0	1754.0	25.0	1754.0	25.0	3.8
CastlegateCO_97	185	2.03	2.980	0.083	0.2004	0.0054	0.94514	1401.0	22.0	1177.0	29.0	1758.0	43.0	1177.0	29.0	16.0
CastlegateCO_98	237	1.975	3.072	0.030	0.2468	0.0027	0.54038	1425.3	7.5	1422.0	14.0	1425.0	16.0	1425.0	16.0	0.2
CastlegateCO_99	368	0.831	2.899	0.034	0.2355	0.0028	0.67753	1380.9	9.0	1363.0	14.0	1417.0	17.0	1417.0	17.0	3.8
CastlegateCO_100	507	2.79	2.587	0.040	0.2123	0.0023	0.77995	1296.0	11.0	1241.0	12.0	1386.0	18.0	1386.0	18.0	10.5
CastlegateCO_101	239	2.4	3.381	0.033	0.2616	0.0028	0.56857	1499.5	7.7	1498.0	14.0	1517.0	17.0	1517.0	17.0	1.3
CastlegateCO_102	1372	3.296	0.102	0.002	0.0147	0.0002	0.50273	98.1	1.7	94.2	1.5	168.0	37.0	94.2	1.5	4.0
CastlegateCO_103	59.4	0.792	5.347	0.081	0.3299	0.0048	0.73079	1876.0	13.0	1837.0	23.0	1922.0	29.0	1922.0	29.0	4.4
CastlegateCO_104	709	2.269	0.178	0.004	0.0264	0.0004	0.43964	167.5	3.5	167.8	2.8	165.0	51.0	167.8	2.8	0.2
CastlegateCO_105	192.8	1.412	3.069	0.027	0.2455	0.0026	0.51196	1424.5	6.8	1415.0	13.0	1450.0	17.0	1450.0	17.0	2.4
CastlegateCO_107	231.6	8.88	1.737	0.034	0.1699	0.0033	0.70095	1022.0	13.0	1011.0	18.0	1058.0	30.0	1011.0	18.0	1.1
CastlegateCO_108	181.6	0.508	5.040	0.120	0.3138	0.0090	0.7636	1822.0	20.0	1757.0	44.0	1919.0	32.0	1919.0	32.0	8.4
CastlegateCO_109	279	1.11	0.434	0.009	0.0586	0.0007	0.19999	366.5	6.1	367.0	4.5	342.0	47.0	367.0	4.5	0.1
CastlegateCO_110	208	8.2	0.475	0.010	0.0638	0.0009	0.093875	393.9	6.9	398.8	5.2	384.0	54.0	398.8	5.2	1.2
CastlegateCO_111	326	3.63	4.516	0.062	0.3057	0.0046	0.74469	1737.0	11.0	1719.0	23.0	1745.0	16.0	1745.0	16.0	1.5
CastlegateCO_112	233	0.665	0.260	0.007	0.0364	0.0006	0.046622	234.2	5.7	230.6	3.9	286.0	69.0	230.6	3.9	1.5
CastlegateCO_114	362	1.582	1.725	0.018	0.1704	0.0020	0.58545	1018.5	7.0	1014.0	11.0	1027.0	22.0	1014.0	11.0	0.4
CastlegateCO_115	236.7	2.887	2.028	0.036	0.1869	0.0035	0.66503	1127.0	12.0	1107.0	19.0	1174.0	33.0	1107.0	19.0	1.8
CastlegateCO_116	683	2.38	0.085	0.003	0.0125	0.0002	0.41078	82.5	2.4	80.3	1.5	105.0	62.0	80.3	1.5	2.7
CastlegateCO_117	167	3.27	2.501	0.053	0.2181	0.0036	0.74613	1272.0	15.0	1271.0	19.0	1280.0	27.0	1280.0	27.0	0.7
CastlegateCO_118	195	2.495	13.470	0.200	0.5211	0.0067	0.83412	2713.0	14.0	2702.0	29.0	2719.0	14.0	2719.0	14.0	0.6
CastlegateCO_119	270	1.56	0.512	0.009	0.0665	0.0008	0.19465	420.5	5.9	415.1	4.9	429.0	42.0	415.1	4.9	1.3
CastlegateCO_120	5.32	14.8	0.348	0.063	0.0315	0.0035	0.14048	297.0	49.0	200.0	22.0	1000.0	440.0	DISC	DISC	32.7

Table 2c: Zircon U-Pb Ages And Isotopic Data: Chapter 3

Table 2c: Near San Rafael Swell

Sample Name:								207/235		206/238		206/207		Best age		
Grain #	[U] ppm	U/Th	207/235	2σ error	206/238	2σ error	RHO	Age Ma	2σ error	Age (Ma)	2σ error	Age (Ma)	2σ error	(Ma)	2σ error	% Discordance*
13DQDL_1	50.9	0.715	0.763	0.011	0.0936	0.0009	0.29297	575.6	6.5	576.7	5.0	582.0	20.0	576.7	5.0	0.2
13DQDL_2	95.4	1.302	0.178	0.004	0.0245	0.0004	0.33459	166	3.5	156.2	2.3	328.0	39.0	156.2	2.3	5.9
13DQDL_3	96.8	1.973	1.429	0.015	0.1479	0.0015	0.6467	900.9	6.3	890.1	8.2	934.0	10.0	890.1	8.2	1.2
13DQDL_4	163	1.158	0.135	0.003	0.0193	0.0002	0.10042	129.2	2.9	123.3	1.4	286.0	38.0	123.3	1.4	4.6
13DQDL_5	37.4	1.57	1.851	0.028	0.1771	0.0031	0.70731	1064	10	1051.0	17.0	1092.0	13.0	1051.0	17.0	1.2
13DQDL_6	112.6	1.395	1.681	0.020	0.1609	0.0019	0.67795	1000.8	7.5	962.0	11.0	1089.0	12.0	962.0	11.0	3.9
13DQDL_7	188	6.168	0.561	0.006	0.0717	0.0007	0.46046	452.1	3.6	446.1	4.0	495.0	13.0	446.1	4.0	1.3
13DQDL_8	133.8	0.6605	1.727	0.024	0.1667	0.0024	0.70341	1019.4	9	994.0	13.0	1067.0	12.0	994.0	13.0	2.5
13DQDL_9	208	1.747	0.147	0.004	0.0211	0.0004	0.40123	139.4	3.3	134.7	2.6	218.0	22.0	134.7	2.6	3.4
13DQDL_10	39.3	0.837	2.025	0.032	0.1875	0.0031	0.61081	1123	11	1107.0	17.0	1155.0	17.0	1107.0	17.0	1.4
13DQDL_11	176.8	1.216	1.734	0.019	0.1626	0.0021	0.57799	1020.8	7.2	971.0	11.0	1128.0	15.0	971.0	11.0	4.9
13DQDL_12	309.2	1.558	1.721	0.020	0.1665	0.0023	0.75793	1015.8	7.5	993.0	13.0	1065.0	11.0	993.0	13.0	2.2
13DQDL_13	288	0.698	0.124	0.002	0.0184	0.0002	0.37818	118.6	1.9	117.3	1.2	166.0	20.0	117.3	1.2	1.1
13DQDL_14	700	6.8	0.371	0.006	0.0498	0.0008	0.28753	320	4.6	313.5	4.8	376.0	25.0	313.5	4.8	2.0
13DQDL_14	18.8	0.714	0.440	0.024	0.0579	0.0033	0.55302	370	17	363.0	20.0	415.0	72.0	363.0	20.0	1.9
13DQDL_15	141.1	0.823	6.115	0.053	0.3412	0.0034	0.72506	1991.9	7.6	1892.0	16.0	2096.1	8.8	2096.1	8.8	9.7
13DQDL_16	255	1.03	0.132	0.004	0.0187	0.0003	0.38067	126.3	3.2	119.6	1.9	280.0	43.0	119.6	1.9	5.3
13DQDL_17	196.9	1.02	0.129	0.003	0.0187	0.0002	0.34509	123.5	2.3	119.7	1.5	225.0	27.0	119.7	1.5	3.1
13DQDL_18	498	0.91	0.545	0.006	0.0693	0.0009	0.69687	441.5	3.6	431.8	5.2	489.0	11.0	431.8	5.2	2.2
13DQDL_19	106.9	0.631	0.136	0.005	0.0188	0.0003	0.072029	129.3	4.4	120.2	2.0	373.0	72.0	120.2	2.0	7.0
13DQDL_20	79.5	1.98	2.694	0.034	0.2235	0.0034	0.63102	1326	9.3	1300.0	18.0	1373.0	16.0	1373.0	16.0	5.3
13DQDL_21	52.2	2.307	0.128	0.005	0.0177	0.0005	0.48539	121.9	4	113.2	2.9	340.0	41.0	113.2	2.9	7.1
13DQDL_22	186.5	3.86	1.246	0.025	0.1025	0.0017	0.73959	821	11	628.9	9.7	1383.0	18.0	628.9	9.7	23.4
13DQDL_23	336	0.74	0.586	0.010	0.0726	0.0007	0.40712	468	6.1	451.6	3.9	546.0	26.0	451.6	3.9	3.5
13DQDL_24	236	0.863	0.137	0.003	0.0186	0.0003	0.14055	129.9	3	118.7	1.7	377.0	48.0	118.7	1.7	8.6
13DQDL_25	199.5	0.994	0.155	0.016	0.0189	0.0003	0.79372	141	10	120.6	2.0	480.0	120.0	120.6	2.0	14.5
13DQDL_26	520	0.59	0.139	0.003	0.0184	0.0002	0.27024	132.8	2.8	117.7	1.4	422.0	42.0	117.7	1.4	11.4

13DQDL_27	61.5	0.872	3.610	0.049	0.2538	0.0039	0.63566	1553	11	1458.0	20.0	1705.0	14.0	1705.0	14.0	14.5
13DQDL_28	78.8	0.6	3.219	0.034	0.2403	0.0023	0.48457	1462.3	8	1388.0	12.0	1581.0	14.0	1581.0	14.0	12.2
13DQDL_29	253	0.74	0.158	0.004	0.0193	0.0002	0.011424	148.7	3.6	122.9	1.5	594.0	47.0	122.9	1.5	17.4
13DQDL_30	53.4	1.255	1.797	0.023	0.1711	0.0017	0.37232	1044.9	8.3	1018.3	9.3	1106.0	15.0	1018.3	9.3	2.5
13DQDL_31	113.4	0.7	0.128	0.004	0.0191	0.0003	0.03456	122.4	3.3	121.7	1.6	220.0	29.0	121.7	1.6	0.6
13DQDL_32	53.7	1.285	3.983	0.046	0.2797	0.0033	0.81124	1630	9.4	1589.0	17.0	1685.9	7.4	1685.9	7.4	5.7
13DQDL_33	226	8.1	1.691	0.023	0.1646	0.0021	0.69052	1004.5	8.7	982.0	12.0	1062.0	14.0	982.0	12.0	2.2
13DQDL_34	184.3	1.915	2.245	0.019	0.2029	0.0020	0.57534	1194.9	6	1190.0	11.0	1211.8	9.7	1190.0	11.0	0.4
13DQDL_35	272	1.624	2.913	0.028	0.2328	0.0027	0.76554	1385.7	7.2	1349.0	14.0	1449.4	9.1	1449.4	9.1	6.9
13DQDL_36	67.3	0.602	3.906	0.046	0.2808	0.0039	0.85345	1614.1	9.7	1595.0	20.0	1647.0	12.0	1647.0	12.0	3.2
13DQDL_37	324.4	0.898	0.130	0.002	0.0187	0.0002	0.1225	123.9	1.9	119.2	1.5	218.0	30.0	119.2	1.5	3.8
13DQDL_38	305	0.704	0.129	0.002	0.0192	0.0003	0.19346	122.8	2	122.3	1.8	184.0	26.0	122.3	1.8	0.4
13DQDL_39	85	1.312	1.761	0.020	0.1654	0.0015	0.27515	1030.9	7.5	986.7	8.3	1142.0	18.0	986.7	8.3	4.3
13DQDL_40	50	1.369	2.388	0.037	0.2001	0.0027	0.46165	1238	11	1176.0	15.0	1343.0	19.0	1176.0	15.0	5.0
13DQDL_41	126	0.6	0.129	0.005	0.0182	0.0003	0.22056	122.6	4.2	116.4	1.9	302.0	51.0	116.4	1.9	5.1
13DQDL_42	72.9	1.278	0.811	0.013	0.0942	0.0012	0.41412	604.5	7.5	580.4	7.1	685.0	14.0	580.4	7.1	4.0
13DQDL_43	86.1	0.621	0.773	0.011	0.0915	0.0011	0.3047	582.2	6	564.4	6.7	666.0	19.0	564.4	6.7	3.1
13DQDL_44	122.6	0.593	0.129	0.003	0.0183	0.0003	0.11792	123	2.9	116.8	1.8	298.0	45.0	116.8	1.8	5.0
13DQDL_45	130.7	0.897	0.132	0.005	0.0186	0.0003	0.16712	125.7	4.2	118.5	1.9	341.0	58.0	118.5	1.9	5.7
13DQDL_46	333	0.71	0.126	0.002	0.0184	0.0002	0.23004	120.8	1.8	117.3	1.5	201.0	24.0	117.3	1.5	2.9
13DQDL_47	167.1	1.098	0.126	0.003	0.0183	0.0004	0.30444	120	2.8	116.9	2.6	235.0	34.0	116.9	2.6	2.6
13DQDL_48	34.3	1.461	3.486	0.050	0.2544	0.0032	0.79435	1523	11	1461.0	16.0	1620.0	16.0	1620.0	16.0	9.8
13DQDL_49	296	2.2	3.717	0.028	0.2645	0.0024	0.65722	1575.4	5.9	1513.0	12.0	1663.8	7.8	1663.8	7.8	9.1
13DQDL_50	313	0.872	5.598	0.039	0.3460	0.0032	0.7974	1916.3	5.9	1915.0	16.0	1921.8	5.5	1921.8	5.5	0.4
13DQDL_51	289	0.953	0.146	0.005	0.0189	0.0003	0.34734	137.8	4.7	120.8	1.6	477.0	64.0	120.8	1.6	12.3
13DQDL_52	51.2	1.093	2.834	0.035	0.2158	0.0022	0.41485	1365.4	9.5	1260.0	12.0	1530.0	15.0	1530.0	15.0	17.6
13DQDL_53	98.7	1.322	0.494	0.009	0.0622	0.0008	0.52474	407.6	6.1	388.9	4.5	530.0	20.0	388.9	4.5	4.6
13DQDL_54	206	1.768	2.840	0.029	0.2308	0.0031	0.59442	1365.8	7.7	1339.0	16.0	1422.0	15.0	1422.0	15.0	5.8
13DQDL_55	145.6	1.246	0.492	0.007	0.0642	0.0007	0.29565	405.7	4.9	401.1	4.3	454.0	20.0	401.1	4.3	1.1
13DQDL_56	178.4	1.493	2.262	0.024	0.2041	0.0025	0.67421	1200.8	7.3	1199.0	14.0	1220.0	12.0	1199.0	14.0	0.1
13DQDL_57	249	1.082	0.771	0.009	0.0884	0.0008	0.12734	580	5.4	546.2	4.8	703.0	21.0	546.2	4.8	5.8
13DQDL_58	127.1	0.6165	0.128	0.003	0.0185	0.0003	0.21432	122.6	2.8	118.3	1.6	246.0	36.0	118.3	1.6	3.5
13DQDL_59	272.4	0.957	0.142	0.004	0.0200	0.0004	0.17251	135	3.1	127.4	2.8	288.0	44.0	127.4	2.8	5.6
13DQDL_60	40.94	1.11	1.638	0.024	0.1602	0.0019	0.22494	984.1	9.3	958.0	11.0	1052.0	20.0	958.0	11.0	2.7
13DQDL_61	191.2	1.87	2.419	0.038	0.2038	0.0037	0.76925	1248	11	1195.0	20.0	1338.0	15.0	1195.0	20.0	4.2

13DQDL_61	154.7	1.397	2.573	0.031	0.2173	0.0023	0.4264	1292.7	8.7	1267.0	12.0	1341.0	15.0	1341.0	15.0	5.5
13DQDL_62	205	0.953	0.125	0.003	0.0188	0.0002	0.31814	119.8	2.3	119.9	1.3	151.0	24.0	119.9	1.3	0.1
13DQDL_63	294	0.809	0.141	0.006	0.0196	0.0003	0.18915	133.6	5.1	125.3	1.9	373.0	80.0	125.3	1.9	6.2
13DQDL_64	571	2.29	2.035	0.022	0.1895	0.0020	0.93128	1126.7	7.4	1118.0	11.0	1141.2	7.1	1118.0	11.0	0.8
13DQDL_65	134	0.725	0.121	0.004	0.0186	0.0002	0.13851	116.2	3.3	118.5	1.5	152.0	28.0	118.5	1.5	2.0
13DQDL_67	154.9	5.78	1.710	0.028	0.1668	0.0038	0.67873	1011	11	994.0	21.0	1038.0	20.0	994.0	21.0	1.7
13DQDL_68	299	0.7	0.125	0.002	0.0183	0.0002	0.021264	119.7	2	116.7	1.3	190.0	26.0	116.7	1.3	2.5
13DQDL_69	168.5	0.835	0.121	0.003	0.0181	0.0003	0.18551	116.3	2.3	115.7	1.8	193.0	33.0	115.7	1.8	0.5
13DQDL_70	190.4	7.56	2.914	0.057	0.2168	0.0048	0.81561	1385	15	1264.0	25.0	1562.0	14.0	1562.0	14.0	19.1
13DQDL_72	147.7	1.081	5.007	0.068	0.3153	0.0049	0.73528	1821	11	1766.0	24.0	1888.0	12.0	1888.0	12.0	6.5
13DQDL_73	319	0.867	0.156	0.008	0.0192	0.0003	0.32547	146.5	7	122.8	1.7	506.0	88.0	122.8	1.7	16.2
13DQDL_74	291	0.792	0.135	0.003	0.0191	0.0003	0.50872	128.3	2.2	121.8	1.8	270.0	24.0	121.8	1.8	5.1
13DQDL_75	129.9	1.087	0.519	0.044	0.0367	0.0008	0.41759	418	28	232.5	4.9	1600.0	140.0	DISC	DISC	85.5
13DQDL_76	29.9	0.666	1.819	0.037	0.1702	0.0026	0.27482	1055	14	1013.0	14.0	1160.0	32.0	1013.0	14.0	4.0
13DQDL_77	226.5	1.087	1.722	0.017	0.1691	0.0019	0.65428	1016.6	6.4	1007.0	11.0	1052.0	12.0	1007.0	11.0	0.9
13DQDL_78	245	0.889	0.160	0.004	0.0195	0.0003	0.35099	150.2	3.8	124.4	1.8	573.0	42.0	124.4	1.8	17.2
13DQDL_79	75.2	2.019	1.451	0.019	0.1471	0.0015	0.5654	909.7	7.9	884.8	8.7	978.0	14.0	884.8	8.7	2.7
13DQDL_80	444	0.717	0.126	0.003	0.0189	0.0003	0.52359	120.1	2.2	120.4	1.8	148.0	20.0	120.4	1.8	0.2
13DQDL_81	559	6.43	0.357	0.004	0.0488	0.0006	0.52161	309.8	2.9	306.9	3.6	353.0	14.0	306.9	3.6	0.9
13DQDL_82	58	0.672	0.479	0.012	0.0586	0.0010	0.014525	397.9	8.2	367.2	6.1	568.0	45.0	367.2	6.1	7.7
13DQDL_83	100.2	1.368	1.760	0.021	0.1688	0.0020	0.52282	1031.5	7.9	1005.0	11.0	1098.0	14.0	1005.0	11.0	2.6
13DQDL_84	81.1	1.865	0.689	0.017	0.0789	0.0015	0.69905	531	10	489.6	8.9	737.0	25.0	489.6	8.9	7.8
13DQDL_85	321	0.68	0.165	0.010	0.0200	0.0003	0.54872	154.1	8.7	127.7	1.9	600.0	110.0	127.7	1.9	17.1
13DQDL_86	249	0.831	0.330	0.004	0.0461	0.0004	0.2736	289.2	3.3	290.2	2.6	287.0	18.0	290.2	2.6	0.3
13DQDL_87	194	0.572	0.168	0.011	0.0200	0.0003	0.29662	158	10	127.9	1.9	670.0	130.0	127.9	1.9	19.1
13DQDL_88	24.38	0.69	2.585	0.050	0.2254	0.0034	0.37996	1295	14	1310.0	18.0	1284.0	15.0	1284.0	15.0	2.0
13DQDL_89	230.8	2.111	0.583	0.007	0.0747	0.0008	0.47776	466.2	4.5	464.4	4.9	485.0	13.0	464.4	4.9	0.4
13DQDL_89	336	0.914	1.572	0.024	0.1581	0.0035	0.90472	959	9.3	946.0	20.0	995.0	16.0	946.0	20.0	1.4
13DQDL_90	323	0.714	0.127	0.003	0.0186	0.0003	0.19881	121.6	2.3	118.9	1.7	195.0	25.0	118.9	1.7	2.2
13DQDL_91	163.7	0.824	0.251	0.004	0.0360	0.0005	0.20704	227.3	3.5	227.7	3.0	224.0	24.0	227.7	3.0	0.2
13DQDL_92	34.8	0.377	3.354	0.055	0.2505	0.0030	0.34347	1492	13	1441.0	16.0	1581.0	25.0	1581.0	25.0	8.9
13DQDL_93	125.1	0.6182	0.124	0.004	0.0178	0.0003	0.09072	118.3	3.3	113.6	2.0	277.0	36.0	113.6	2.0	4.0
13DQDL_94	192.7	1.476	3.918	0.055	0.2549	0.0037	0.83202	1616	11	1463.0	19.0	1831.1	7.6	1831.1	7.6	20.1
13DQDL_95	84.8	1.985	4.909	0.081	0.3129	0.0058	0.76016	1804	14	1754.0	29.0	1878.0	16.0	1878.0	16.0	6.6
13DQDL_96	362	0.738	0.129	0.003	0.0183	0.0003	0.41003	122.9	2.3	116.9	1.6	234.0	27.0	116.9	1.6	4.9

13DQDL_97	397	0.774	0.134	0.003	0.0193	0.0003	0.34882	127.8	2.4	123.1	2.0	228.0	24.0	123.1	2.0	3.7
13DQDL_98	84.3	1.494	2.233	0.025	0.1984	0.0022	0.55926	1190.9	8	1167.0	12.0	1227.0	11.0	1167.0	12.0	2.0
13DQDL_99	366.4	0.7993	0.308	0.027	0.0200	0.0004	0.7593	271	21	127.4	2.7	1770.0	130.0	DISC	DISC	92.8
13DQDL_100	93.2	0.695	0.195	0.006	0.0187	0.0004	0.084091	180.5	5.3	119.1	2.2	1083.0	60.0	DISC	DISC	89.0
13DQDL_101	154	1.676	1.981	0.026	0.1813	0.0024	0.80342	1108.4	9	1074.0	13.0	1181.0	15.0	1074.0	13.0	3.1
13DQDL_102	114	1.429	1.727	0.020	0.1562	0.0021	0.64439	1018	7.6	936.0	12.0	1214.0	14.0	936.0	12.0	8.1
13DQDL_103	466	0.4661	2.715	0.048	0.1493	0.0023	0.90202	1331	13	897.0	13.0	2134.7	8.7	DISC	DISC	58.0
13DQDL_104	298	0.955	0.146	0.006	0.0190	0.0003	0.0037405	137.9	5.5	121.2	2.0	443.0	86.0	121.2	2.0	12.1
13DQDL_105	141	1.908	2.037	0.043	0.1864	0.0034	0.80106	1128	15	1101.0	19.0	1166.0	16.0	1101.0	19.0	2.4
13DQDL_106	85.3	1.113	14.270	0.190	0.5314	0.0052	0.70164	2766	13	2747.0	22.0	2759.0	15.0	2759.0	15.0	0.4
13DQDL_107	184.4	1.225	2.140	0.025	0.1973	0.0021	0.74117	1162.3	7.9	1161.0	11.0	1161.5	8.7	1161.0	11.0	0.1
13DQDL_108	33.3	0.832	1.767	0.029	0.1702	0.0027	0.37295	1032	11	1013.0	15.0	1079.0	20.0	1013.0	15.0	1.8
13DQDL_109	21.68	1.318	3.663	0.065	0.2663	0.0040	0.52133	1562	14	1522.0	20.0	1628.0	18.0	1628.0	18.0	6.5
13DQDL_110	47.3	1.8	0.127	0.006	0.0188	0.0005	0.058712	121.4	5.4	120.3	2.9	300.0	59.0	120.3	2.9	0.9
13DQDL_111	43.1	0.965	0.839	0.018	0.0998	0.0014	0.27479	618	10	613.4	8.0	634.0	30.0	613.4	8.0	0.7
13DQDL_112	94.7	0.854	4.425	0.036	0.3005	0.0034	0.55736	1716.7	6.7	1698.0	17.0	1739.0	12.0	1739.0	12.0	2.4
13DQDL_113	76	2.449	4.739	0.047	0.3103	0.0029	0.51335	1775.7	8.6	1742.0	14.0	1814.1	7.1	1814.1	7.1	4.0
13DQDL_114	453	0.85	0.523	0.005	0.0681	0.0006	0.42301	427.2	3.5	424.5	3.7	440.0	10.0	424.5	3.7	0.6
13DQDL_115	87.8	1.458	1.637	0.020	0.1615	0.0018	0.52632	983.9	7.7	965.0	10.0	1023.0	16.0	965.0	10.0	1.9
13DQDL_116	156.4	2.036	1.850	0.020	0.1757	0.0019	0.68495	1063.2	7.3	1043.0	10.0	1089.0	12.0	1043.0	10.0	1.9
13DQDL_117	267	1.075	0.130	0.003	0.0196	0.0003	0.082981	124.3	2.3	125.0	1.9	169.0	27.0	125.0	1.9	0.6
13DQDL_118	21.51	0.5662	11.950	0.160	0.4629	0.0054	0.6241	2600	12	2459.0	25.0	2712.4	9.9	2712.4	9.9	9.3
13DQDL_119	293	0.912	0.525	0.006	0.0684	0.0007	0.39521	428.5	4.2	426.2	4.0	436.0	17.0	426.2	4.0	0.5
13DQDL_120	123	0.639	0.188	0.025	0.0194	0.0004	0.47201	171	20	123.8	2.5	930.0	220.0	123.8	2.5	27.6
13DQDL_121	147.7	1.37	0.845	0.012	0.1006	0.0011	0.15759	621.8	6.8	618.1	6.2	625.0	17.0	618.1	6.2	0.6
Cedar_1	20.8	0.454	0.591	0.091	0.0247	0.0016	0.44985	448	52	157.2	9.9	2630.0	270.0	DISC	DISC	64.9
Cedar_2	149.5	1.793	1.885	0.026	0.1805	0.0018	0.27454	1076.2	8.9	1070.0	10.0	1107.0	28.0	1070.0	10.0	0.6
Cedar_3	58.3	1.235	2.398	0.039	0.2109	0.0027	0.56713	1241	12	1233.0	14.0	1275.0	30.0	1275.0	30.0	3.3
Cedar_4	71.2	3.382	2.205	0.033	0.2009	0.0032	0.28476	1182	10	1184.0	17.0	1196.0	39.0	1184.0	17.0	0.2
Cedar_5	24	1.8	5.640	0.130	0.3168	0.0072	0.6361	1918	20	1772.0	35.0	2085.0	35.0	2085.0	35.0	15.0
Cedar_6	111.7	1.548	2.129	0.039	0.1937	0.0029	0.63719	1160	12	1141.0	16.0	1197.0	30.0	1141.0	16.0	1.6
Cedar_7	146.3	0.779	1.065	0.018	0.1118	0.0019	0.33382	736.8	8.8	683.0	11.0	891.0	41.0	683.0	11.0	7.3
Cedar_8	177	1.306	3.668	0.050	0.2648	0.0036	0.69724	1566	11	1516.0	18.0	1633.0	20.0	1633.0	20.0	7.2

Cedar_9	547	12.45	1.871	0.020	0.1798	0.0019	0.49981	1071.6	7	1066.0	11.0	1096.0	23.0	1066.0	11.0	0.5
Cedar_10	310	6.3	0.332	0.011	0.0449	0.0009	0.034381	291.2	8.1	282.8	5.5	377.0	92.0	282.8	5.5	2.9
Cedar_10	67	0.58	0.737	0.041	0.0853	0.0033	0.17307	559	24	527.0	19.0	700.0	130.0	527.0	19.0	5.7
Cedar_11	330	53	5.160	0.110	0.3299	0.0080	0.76302	1844	18	1837.0	39.0	1893.0	26.0	1893.0	26.0	3.0
Cedar_12	143.8	1.863	1.564	0.040	0.1508	0.0038	0.54931	955	16	905.0	22.0	1099.0	44.0	905.0	22.0	5.2
Cedar_13	86	0.768	0.768	0.016	0.0931	0.0018	0.022152	578	9.2	574.0	10.0	604.0	62.0	574.0	10.0	0.7
Cedar_14	92.5	1.028	0.173	0.008	0.0246	0.0007	0.39855	161.3	7	156.7	4.4	290.0	110.0	156.7	4.4	2.9
Cedar_15	113	1.48	1.471	0.027	0.1486	0.0020	0.092384	919	11	894.0	11.0	978.0	42.0	894.0	11.0	2.7
Cedar_16	299	0.679	0.336	0.008	0.0462	0.0008	0.37482	294.1	6.3	291.0	4.9	303.0	55.0	291.0	4.9	1.1
Cedar_17	34	1.117	0.801	0.031	0.0985	0.0023	0.02013	596	17	605.0	14.0	543.0	93.0	605.0	14.0	1.5
Cedar_18	72	1.557	2.098	0.039	0.1926	0.0025	0.14429	1147	13	1135.0	13.0	1140.0	44.0	1135.0	13.0	1.0
Cedar_19	140	0.934	1.805	0.030	0.1751	0.0023	0.33411	1046	11	1040.0	13.0	1052.0	37.0	1040.0	13.0	0.6
Cedar_20	205.7	1.091	3.541	0.045	0.2638	0.0038	0.69955	1535	10	1509.0	20.0	1574.0	19.0	1574.0	19.0	4.1
Cedar_21	177.4	21.7	3.937	0.050	0.2831	0.0029	0.44469	1621	10	1607.0	14.0	1635.0	23.0	1635.0	23.0	1.7
Cedar_22	70.7	1.185	3.074	0.055	0.2433	0.0039	0.47552	1424	14	1406.0	21.0	1453.0	30.0	1453.0	30.0	3.2
Cedar_23	154.1	0.828	0.467	0.012	0.0624	0.0009	0.096482	388.3	8	390.0	5.4	381.0	63.0	390.0	5.4	0.4
Cedar_24	475	11.5	1.757	0.021	0.1713	0.0021	0.65709	1030.1	7.8	1019.0	11.0	1046.0	22.0	1019.0	11.0	1.1
Cedar_25	548	2.054	0.140	0.004	0.0206	0.0005	0.36139	134	3.6	131.2	3.0	181.0	68.0	131.2	3.0	2.1
Cedar_26	285	1.798	1.518	0.016	0.1535	0.0019	0.26471	938.5	6.7	920.0	11.0	982.0	32.0	920.0	11.0	2.0
Cedar_27	240	0.721	2.146	0.070	0.1790	0.0018	0.04933	1159	22	1061.5	9.7	1349.0	63.0	1061.5	9.7	8.4
Cedar_28	84.8	1.782	2.093	0.036	0.1907	0.0028	0.59106	1148	12	1127.0	16.0	1167.0	30.0	1127.0	16.0	1.8
Cedar_29	109.1	1.378	3.792	0.045	0.2716	0.0026	0.46376	1591.4	9.8	1549.0	13.0	1658.0	22.0	1658.0	22.0	6.6
Cedar_30	281	4.74	0.456	0.007	0.0607	0.0008	0.30823	381.3	4.6	379.7	4.6	399.0	34.0	379.7	4.6	0.4
Cedar_31	246	0.572	1.961	0.034	0.1816	0.0022	0.38503	1101	12	1075.0	12.0	1127.0	34.0	1075.0	12.0	2.4
Cedar_32	25.26	0.798	0.759	0.027	0.0893	0.0021	0.1216	575	16	551.0	12.0	648.0	82.0	551.0	12.0	4.2
Cedar_33	114.6	1.121	2.646	0.040	0.2238	0.0039	0.38224	1312	11	1301.0	20.0	1304.0	36.0	1304.0	36.0	0.2
Cedar_34	264	2.873	0.798	0.012	0.0949	0.0011	0.23042	595.2	7	584.6	6.5	614.0	39.0	584.6	6.5	1.8
Cedar_35	126.9	1.157	11.700	0.140	0.4484	0.0074	0.68684	2580	11	2387.0	33.0	2732.0	20.0	2732.0	20.0	12.6
Cedar_36	126	1.359	4.126	0.043	0.2902	0.0029	0.39418	1658.9	8.6	1642.0	14.0	1675.0	21.0	1675.0	21.0	2.0
Cedar_37	77.5	1.03	0.710	0.018	0.0859	0.0014	0.12537	544	11	531.3	8.1	596.0	64.0	531.3	8.1	2.3
Cedar_38	194.7	0.704	0.359	0.011	0.0484	0.0010	0.17544	311.2	8	304.9	6.3	296.0	67.0	304.9	6.3	2.0
Cedar_39	163	1.761	2.044	0.033	0.1924	0.0027	0.47625	1132	11	1134.0	14.0	1119.0	29.0	1134.0	14.0	0.2
Cedar_40	226.8	2.25	4.101	0.061	0.2870	0.0040	0.52516	1653	12	1626.0	20.0	1684.0	27.0	1684.0	27.0	3.4
Cedar_41	280	0.828	0.152	0.005	0.0225	0.0005	0.11332	143.9	3.9	143.7	3.1	170.0	74.0	143.7	3.1	0.1
Cedar_42	261.2	1.321	0.165	0.005	0.0244	0.0004	0.079116	155.2	4.1	155.1	2.7	173.0	74.0	155.1	2.7	0.1

Cedar_43	147.8	3.119	1.820	0.037	0.1799	0.0037	0.47325	1052	13	1066.0	20.0	1025.0	33.0	1066.0	20.0	1.3
Cedar_44	43.3	1.91	0.596	0.035	0.0767	0.0019	0.0028564	472	22	476.0	11.0	440.0	140.0	476.0	11.0	0.8
Cedar_45	217	1.491	0.501	0.011	0.0676	0.0010	0.43029	412.8	7.1	422.3	6.0	379.0	43.0	422.3	6.0	2.3
Cedar_46	127.8	2.28	1.684	0.031	0.1663	0.0024	0.15735	1002	12	992.0	13.0	1027.0	45.0	992.0	13.0	1.0
Cedar_47	105.2	1.984	0.798	0.017	0.0962	0.0016	0.38843	595	9.8	591.8	9.2	629.0	49.0	591.8	9.2	0.5
Cedar_48	101.2	0.821	0.599	0.015	0.0761	0.0013	0.21757	475.8	9.5	472.5	7.7	495.0	60.0	472.5	7.7	0.7
Cedar_49	144.5	2.46	3.877	0.044	0.2804	0.0047	0.33598	1608.4	9.1	1593.0	24.0	1637.0	31.0	1637.0	31.0	2.7
Cedar_50	280	0.863	0.254	0.007	0.0361	0.0005	0.059096	231.4	5.9	228.7	3.2	243.0	64.0	228.7	3.2	1.2
Cedar_51	397	2.24	0.499	0.010	0.0653	0.0012	0.40827	411.9	6.8	407.6	7.4	442.0	43.0	407.6	7.4	1.0
Cedar_52	319	13.6	0.616	0.016	0.0782	0.0018	0.50676	486.7	9.9	485.0	10.0	523.0	56.0	485.0	10.0	0.3
Cedar_53	93.8	0.935	4.440	0.120	0.2856	0.0081	0.79059	1724	23	1617.0	41.0	1875.0	33.0	1875.0	33.0	13.8
Cedar_54	49.4	0.5133	1.328	0.035	0.1392	0.0030	0.17536	859	16	840.0	17.0	916.0	70.0	840.0	17.0	2.2
Cedar_55	437	3.39	1.915	0.032	0.1819	0.0027	0.74154	1085	11	1077.0	15.0	1111.0	21.0	1077.0	15.0	0.7
Cedar_56	441	1.478	0.501	0.009	0.0663	0.0011	0.62428	412.9	5.9	413.6	6.8	391.0	37.0	413.6	6.8	0.2
Cedar_57	149.2	0.948	0.459	0.013	0.0603	0.0011	0.41382	384	9	377.5	6.6	427.0	52.0	377.5	6.6	1.7
Cedar_58	112.4	1.512	4.033	0.052	0.2859	0.0032	0.39944	1642	11	1621.0	16.0	1685.0	24.0	1685.0	24.0	3.8
Cedar_59	409.3	2.7	1.052	0.025	0.0979	0.0018	0.75853	731	12	602.0	11.0	1123.0	33.0	602.0	11.0	17.6
Cedar_60	61.8	1.149	0.794	0.022	0.0943	0.0021	0.22579	592	12	581.0	12.0	656.0	63.0	581.0	12.0	1.9
Cedar_61	198	1.127	4.806	0.043	0.3209	0.0026	0.58764	1785.4	7.6	1794.0	13.0	1777.0	14.0	1777.0	14.0	1.0
Cedar_62	47.3	1.516	1.716	0.035	0.1705	0.0026	0.51842	1015	13	1016.0	14.0	1015.0	40.0	1016.0	14.0	0.1
Cedar_63	140.1	3.67	0.497	0.010	0.0648	0.0012	0.28925	409.9	6.6	404.8	7.5	432.0	54.0	404.8	7.5	1.2
Cedar_64	113.7	1.061	1.962	0.069	0.1750	0.0022	0.49955	1098	22	1039.0	12.0	1228.0	55.0	1039.0	12.0	5.4
Cedar_65	62.5	0.696	0.160	0.010	0.0230	0.0008	0.083618	149.9	8.7	146.6	5.0	220.0	130.0	146.6	5.0	2.2
Cedar_66	147.4	1.369	0.759	0.015	0.0898	0.0017	0.45082	572.5	8.4	554.4	9.8	647.0	42.0	554.4	9.8	3.2
Cedar_67	99.4	0.45	0.329	0.010	0.0460	0.0011	0.027694	287.9	7.7	289.9	6.5	296.0	83.0	289.9	6.5	0.7
Cedar_68	591	2.426	1.587	0.018	0.1590	0.0019	0.62498	964.6	6.9	951.0	11.0	1001.0	20.0	951.0	11.0	1.4
Cedar_69	145.2	1.558	0.559	0.011	0.0725	0.0013	0.27361	450.2	7	451.1	8.1	440.0	51.0	451.1	8.1	0.2
Cedar_70	306	1.414	0.140	0.004	0.0199	0.0004	0.34114	133.5	3.2	126.8	2.4	236.0	58.0	126.8	2.4	5.0
Cedar_71	256	1.851	1.910	0.033	0.1796	0.0030	0.58505	1086	11	1065.0	17.0	1131.0	31.0	1065.0	17.0	1.9
Cedar_72	218	3.01	0.761	0.013	0.0929	0.0011	0.36705	574.3	7.4	572.8	6.4	563.0	35.0	572.8	6.4	0.3
Cedar_73	146	1.249	1.836	0.030	0.1781	0.0029	0.51407	1060	11	1056.0	16.0	1056.0	34.0	1056.0	16.0	0.4
Cedar_74	423	3.34	2.051	0.023	0.1886	0.0023	0.56541	1132.2	7.8	1113.0	12.0	1157.0	23.0	1113.0	12.0	1.7
Cedar_75	241.5	1.568	1.740	0.018	0.1704	0.0018	0.3013	1023	6.7	1014.4	9.7	1026.0	25.0	1014.4	9.7	0.8
Cedar_76	541.3	1.263	0.537	0.013	0.0664	0.0013	0.3492	437.4	8	414.1	7.6	569.0	50.0	414.1	7.6	5.3
Cedar_76	253	1.148	0.497	0.006	0.0635	0.0008	0.21434	409.1	4.3	397.6	4.7	449.0	34.0	397.6	4.7	2.8

Cedar_77	290.8	1.453	0.144	0.003	0.0213	0.0003	0.21772	136.9	2.4	135.8	1.9	127.0	45.0	135.8	1.9	0.8
Cedar_78	29.7	0.703	1.906	0.046	0.1885	0.0032	0.39752	1083	17	1113.0	17.0	1034.0	49.0	1113.0	17.0	2.8
Cedar_78	61.5	5.91	1.928	0.087	0.1714	0.0057	0.74022	1088	30	1019.0	31.0	1209.0	57.0	1019.0	31.0	6.3
Cedar_79	36.2	1.6	3.577	0.096	0.2600	0.0060	0.63502	1542	21	1489.0	31.0	1616.0	44.0	1616.0	44.0	7.9
Cedar_80	38.6	0.942	2.079	0.044	0.1924	0.0027	0.35927	1143	14	1134.0	15.0	1153.0	38.0	1134.0	15.0	0.8
Cedar_81	315	0.3569	0.392	0.009	0.0526	0.0011	0.68552	335.5	6.8	330.1	7.0	340.0	38.0	330.1	7.0	1.6
Cedar_82	46.6	0.504	2.216	0.041	0.1923	0.0025	0.36279	1187	13	1133.0	14.0	1273.0	38.0	1133.0	14.0	4.5
Cedar_83	141.3	1.364	1.978	0.055	0.1818	0.0037	0.52501	1104	18	1076.0	20.0	1142.0	27.0	1076.0	20.0	2.5
Cedar_84	76.7	1.155	1.595	0.021	0.1597	0.0016	0.21624	967.4	8.2	955.1	8.8	974.0	29.0	955.1	8.8	1.3
Cedar_85	183.9	1.067	1.980	0.033	0.1758	0.0020	0.18759	1111	12	1044.0	11.0	1240.0	36.0	1044.0	11.0	6.0
Cedar_86	302.2	1.176	0.333	0.008	0.0446	0.0008	0.28304	291.5	5.8	281.0	4.8	367.0	53.0	281.0	4.8	3.6
Cedar_86	314.3	1.512	0.518	0.016	0.0648	0.0016	0.6865	426	11	405.0	10.0	532.0	48.0	405.0	10.0	4.9
Cedar_87	130.9	2.621	1.691	0.028	0.1656	0.0031	0.52695	1004	11	987.0	17.0	1042.0	28.0	987.0	17.0	1.7
Cedar_87	13.8	0.6	0.960	0.068	0.0850	0.0084	0.14132	700	49	526.0	50.0	1290.0	350.0	526.0	50.0	24.9
Cedar_88	5.28	0.6	1.335	0.090	0.1285	0.0050	0.15177	850	40	778.0	28.0	1000.0	160.0	778.0	28.0	8.5
Cedar_89	365	17.34	0.521	0.006	0.0689	0.0007	0.38236	425.7	3.9	429.5	4.4	425.0	24.0	429.5	4.4	0.9
Cedar_90	111	0.935	0.764	0.013	0.0907	0.0011	0.091642	577.9	7	559.7	6.6	625.0	41.0	559.7	6.6	3.1
Cedar_91	76.8	0.935	1.422	0.018	0.1441	0.0015	0.23628	897.8	7.7	867.9	8.5	978.0	30.0	867.9	8.5	3.3
Cedar_93	159	1.79	2.058	0.020	0.1894	0.0016	0.37574	1134.7	6.6	1118.0	8.8	1164.0	21.0	1118.0	8.8	1.5
Cedar_94	54	2.08	1.722	0.032	0.1609	0.0028	0.35803	1020	12	961.0	16.0	1161.0	39.0	961.0	16.0	5.8
Cedar_95	241	0.749	0.266	0.005	0.0376	0.0005	0.23638	238.9	3.8	237.8	3.0	250.0	41.0	237.8	3.0	0.5
Cedar_96	143.2	2.034	1.689	0.028	0.1577	0.0025	0.44027	1003	10	944.0	14.0	1148.0	33.0	944.0	14.0	5.9
Cedar_97	144.7	1.243	5.448	0.054	0.3159	0.0028	0.66251	1891.8	8.5	1770.0	13.0	2046.0	13.0	2046.0	13.0	13.5
Cedar_98	62.2	2.156	1.463	0.026	0.1499	0.0021	0.018427	914	11	900.0	12.0	953.0	40.0	900.0	12.0	1.5
Cedar_99	245	1.222	3.748	0.066	0.2623	0.0065	0.67455	1580	14	1500.0	33.0	1705.0	36.0	1705.0	36.0	12.0
Cedar_100	102	0.901	1.154	0.038	0.1266	0.0028	0.1228	783	19	769.0	16.0	817.0	72.0	769.0	16.0	1.8
Cedar_101	65.6	1.331	1.514	0.024	0.1553	0.0018	0.18449	937	10	930.6	9.8	968.0	38.0	930.6	9.8	0.7
Cedar_102	134.6	1.612	0.457	0.008	0.0599	0.0009	0.11339	382.8	5.7	375.2	5.4	427.0	50.0	375.2	5.4	2.0
Cedar_103	279	1.731	3.138	0.040	0.2470	0.0042	0.65937	1443.7	9.2	1423.0	22.0	1499.0	24.0	1499.0	24.0	5.1
Cedar_104	294	1.0216	0.540	0.008	0.0705	0.0006	0.41839	437.9	5	439.0	3.5	444.0	30.0	439.0	3.5	0.3
Cedar_105	108.1	1.258	0.506	0.009	0.0670	0.0009	0.18958	415.3	5.8	417.8	5.1	422.0	44.0	417.8	5.1	0.6
Cedar_106	98.1	1.02	2.904	0.033	0.2331	0.0025	0.48629	1382.5	8.4	1354.0	14.0	1433.0	22.0	1433.0	22.0	5.5
Cedar_107	113.8	1.506	0.682	0.019	0.0800	0.0012	0.19607	528	11	496.3	6.9	668.0	56.0	496.3	6.9	6.0
Cedar_108	89	1.375	1.421	0.020	0.1434	0.0015	0.28323	897	8.3	863.7	8.7	983.0	30.0	863.7	8.7	3.7
Cedar_109	124.8	2.293	1.696	0.025	0.1637	0.0016	0.25744	1006	9.5	977.1	8.9	1066.0	27.0	977.1	8.9	2.9

Cedar_110	564	6.69	2.333	0.021	0.1998	0.0022	0.74674	1221.9	6.4	1174.0	12.0	1303.0	14.0	1174.0	12.0	3.9
Cedar_111	142	1.024	5.249	0.052	0.3140	0.0041	0.013183	1861.3	8.8	1760.0	20.0	1963.0	19.0	1963.0	19.0	10.3
Cedar_112	343	1.686	0.158	0.003	0.0227	0.0003	0.2604	148.6	2.7	144.6	1.7	215.0	43.0	144.6	1.7	2.7
Cedar_113	448	4.13	1.417	0.021	0.1389	0.0021	0.57428	896	8.9	838.0	12.0	1028.0	32.0	838.0	12.0	6.5
Cedar_113	273	2.565	1.590	0.021	0.1555	0.0020	0.45732	966.1	8.3	931.0	11.0	1037.0	24.0	931.0	11.0	3.6
Cedar_114	134.6	0.919	2.876	0.032	0.2297	0.0025	0.59552	1376.2	8.5	1333.0	13.0	1418.0	19.0	1418.0	19.0	6.0
Cedar_115	45.6	0.1995	12.600	0.160	0.4791	0.0068	0.53805	2649	12	2523.0	30.0	2747.0	22.0	2747.0	22.0	8.2
Cedar_116	222	1.131	0.776	0.010	0.0941	0.0010	0.38687	583.1	5.6	579.4	6.0	577.0	30.0	579.4	6.0	0.6
Cedar_117	105	0.576	0.171	0.006	0.0251	0.0005	0.10107	158.9	4.6	160.1	3.3	147.0	76.0	160.1	3.3	0.8
Cedar_117	129.9	0.603	2.751	0.079	0.2127	0.0032	0.57545	1341	21	1243.0	17.0	1515.0	44.0	1515.0	44.0	18.0
Cedar_118	82.5	0.5917	3.023	0.041	0.2418	0.0028	0.2707	1413	10	1396.0	15.0	1424.0	28.0	1424.0	28.0	2.0
Cedar_119	102.7	1.037	4.657	0.053	0.3101	0.0034	0.5965	1760.4	9.7	1741.0	17.0	1782.0	15.0	1782.0	15.0	2.3
Cedar_120	151	2.117	4.027	0.056	0.2815	0.0038	0.64741	1639	11	1599.0	19.0	1689.0	24.0	1689.0	24.0	5.3
Buckhorn_1	37.5	0.785	5.049	0.089	0.3079	0.0048	0.36372	1826	15	1730.0	24.0	1938.0	31.0	1938.0	31.0	10.7
Buckhorn_2	207	1.559	1.889	0.030	0.1779	0.0022	0.49904	1078	10	1056.0	12.0	1128.0	27.0	1056.0	12.0	2.0
Buckhorn_3	106.2	1.184	1.670	0.031	0.1613	0.0025	0.21111	997	12	964.0	14.0	1073.0	44.0	964.0	14.0	3.3
Buckhorn_5	112.7	1.571	1.668	0.027	0.1607	0.0026	0.28575	996	10	961.0	14.0	1093.0	35.0	961.0	14.0	3.5
Buckhorn_6	289	3.308	0.398	0.009	0.0534	0.0010	0.18461	340.5	6.3	335.5	6.2	343.0	53.0	335.5	6.2	1.5
Buckhorn_7	496	5.9	0.252	0.014	0.0339	0.0009	0.17162	228	11	215.1	5.4	310.0	110.0	215.1	5.4	5.7
Buckhorn_8	104.3	1.576	4.697	0.055	0.3134	0.0039	0.45255	1766.1	9.8	1757.0	19.0	1780.0	24.0	1780.0	24.0	1.3
Buckhorn_9	112.4	1.551	3.261	0.042	0.2413	0.0028	0.59727	1472.4	9.7	1393.0	15.0	1607.0	23.0	1607.0	23.0	13.3
Buckhorn_10	16.74	1.019	9.660	0.220	0.4043	0.0095	0.66444	2399	22	2194.0	42.0	2598.0	36.0	2598.0	36.0	15.6
Buckhorn_11	354	13.55	0.423	0.007	0.0568	0.0007	0.37643	358.2	5.3	356.1	4.4	388.0	40.0	356.1	4.4	0.6
Buckhorn_12	145.7	1.38	2.700	0.031	0.2261	0.0031	0.45508	1327.6	8.6	1316.0	16.0	1357.0	27.0	1357.0	27.0	3.0
Buckhorn_13	55.8	1.316	3.368	0.086	0.2332	0.0063	0.47644	1495	20	1350.0	33.0	1714.0	51.0	1714.0	51.0	21.2
Buckhorn_14	113.5	1.866	3.574	0.048	0.2444	0.0036	0.4854	1543	11	1409.0	19.0	1739.0	26.0	1739.0	26.0	19.0
Buckhorn_15	34.2	1.209	0.664	0.039	0.0830	0.0031	0.1065	519	23	514.0	18.0	510.0	150.0	514.0	18.0	1.0
Buckhorn_16	396	1.717	0.465	0.013	0.0547	0.0014	0.59245	387.3	8.8	343.2	8.7	704.0	49.0	343.2	8.7	11.4
Buckhorn_17	57.98	1.024	1.511	0.028	0.1529	0.0023	0.092265	939	12	917.0	13.0	994.0	49.0	917.0	13.0	2.3
Buckhorn_18	148	0.651	0.504	0.010	0.0661	0.0011	0.21236	414.4	6.8	412.6	6.9	433.0	56.0	412.6	6.9	0.4
Buckhorn_19	295	1.86	4.266	0.033	0.2885	0.0033	0.61885	1687.3	6.2	1634.0	16.0	1757.0	17.0	1757.0	17.0	7.0
Buckhorn_20	179.6	1.624	3.911	0.047	0.2800	0.0042	0.74578	1615	9.7	1596.0	21.0	1644.0	21.0	1644.0	21.0	2.9
Buckhorn_21	23.5	1.256	6.280	0.120	0.3531	0.0061	0.38542	2013	17	1948.0	29.0	2067.0	38.0	2067.0	38.0	5.8

Buckhorn_22	8.13	1.205	9.520	0.330	0.3580	0.0120	0.40585	2384	31	1969.0	55.0	2751.0	62.0	2751.0	62.0	28.4
Buckhorn_23	216	2.085	2.631	0.043	0.2120	0.0034	0.57563	1308	12	1241.0	18.0	1423.0	26.0	1423.0	26.0	12.8
Buckhorn_24	112.9	4.32	1.527	0.036	0.1486	0.0035	0.5851	941	14	895.0	19.0	1038.0	51.0	895.0	19.0	4.9
Buckhorn_25	47.3	1.053	0.537	0.027	0.0682	0.0016	0.08367	433	17	424.9	9.7	440.0	110.0	424.9	9.7	1.9
Buckhorn_26	26.22	1.001	2.461	0.057	0.1895	0.0036	0.39672	1258	17	1118.0	20.0	1508.0	51.0	1118.0	20.0	11.1
Buckhorn_27	49.7	0.825	10.700	0.120	0.4542	0.0058	0.44577	2496	11	2413.0	26.0	2583.0	18.0	2583.0	18.0	6.6
Buckhorn_28	53.9	1.781	1.375	0.029	0.1404	0.0023	0.40097	877	13	846.0	13.0	961.0	46.0	846.0	13.0	3.5
Buckhorn_29	143.2	2.845	3.451	0.042	0.2466	0.0022	0.55757	1515.2	9.6	1421.0	12.0	1642.0	21.0	1642.0	21.0	13.5
Buckhorn_30	89.9	1.967	2.585	0.043	0.2215	0.0025	0.42596	1295	12	1289.0	13.0	1296.0	29.0	1296.0	29.0	0.5
Buckhorn_31	33	2.491	0.570	0.042	0.0578	0.0026	0.16702	452	26	362.0	16.0	860.0	150.0	362.0	16.0	19.9
Buckhorn_32	149	1.603	0.372	0.022	0.0372	0.0007	0.060089	321	16	235.7	4.5	920.0	130.0	235.7	4.5	26.6
Buckhorn_34	161.2	2.87	1.433	0.022	0.1436	0.0022	0.34921	902.1	9.2	865.0	12.0	1004.0	37.0	865.0	12.0	4.1
Buckhorn_35	140.9	2.253	1.391	0.039	0.1301	0.0044	0.54999	888	17	791.0	25.0	1112.0	59.0	791.0	25.0	10.9
Buckhorn_36	62.6	0.53	12.130	0.180	0.4769	0.0067	0.67004	2615	14	2513.0	29.0	2704.0	20.0	2704.0	20.0	7.1
Buckhorn_37	137	2.226	1.599	0.029	0.1572	0.0023	0.36698	968	11	941.0	13.0	1028.0	33.0	941.0	13.0	2.8
Buckhorn_38	160.7	0.813	0.254	0.010	0.0336	0.0006	0.18178	230.5	7.7	213.0	3.8	347.0	92.0	213.0	3.8	7.6
Buckhorn_39	197.6	1.549	0.240	0.008	0.0332	0.0007	0.09544	218	6.1	210.5	4.4	285.0	69.0	210.5	4.4	3.4
Buckhorn_40	100	2.252	1.964	0.030	0.1852	0.0024	0.37267	1104	10	1097.0	13.0	1110.0	32.0	1097.0	13.0	0.6
Buckhorn_42	108.4	0.928	0.277	0.017	0.0275	0.0008	0.037198	247	13	174.6	5.1	940.0	130.0	174.6	5.1	29.3
Buckhorn_43	66.9	2.11	0.588	0.018	0.0686	0.0015	0.12728	469	12	427.8	9.0	657.0	79.0	427.8	9.0	8.8
Buckhorn_44	91.3	0.853	12.520	0.130	0.4728	0.0048	0.60468	2644.8	9.9	2495.0	21.0	2759.0	15.0	2759.0	15.0	9.6
Buckhorn_45	107.3	1.72	1.010	0.110	0.0832	0.0015	0.57899	682	52	515.0	8.7	1200.0	180.0	515.0	8.7	24.5
Buckhorn_46	51.1	0.3854	1.538	0.045	0.1524	0.0029	0.15597	947	17	914.0	16.0	1024.0	66.0	914.0	16.0	3.5
Buckhorn_47	47.5	1.053	3.073	0.057	0.2433	0.0044	0.46969	1425	14	1403.0	23.0	1438.0	38.0	1438.0	38.0	2.4
Buckhorn_48	131.5	1.013	0.280	0.011	0.0380	0.0009	0.062348	250.6	8.5	240.0	5.8	321.0	86.0	240.0	5.8	4.2
Buckhorn_49	17.79	1.494	1.800	0.063	0.1731	0.0053	0.44409	1054	25	1028.0	29.0	1103.0	72.0	1028.0	29.0	2.5
Buckhorn_50	212	2.47	3.971	0.047	0.2862	0.0035	0.71306	1629.9	9.1	1624.0	17.0	1614.0	17.0	1614.0	17.0	0.6
Buckhorn_51	371	22.09	0.507	0.008	0.0649	0.0009	0.40358	418.3	5.7	405.1	5.5	487.0	36.0	405.1	5.5	3.2
Buckhorn_52	67.7	0.978	3.648	0.054	0.2388	0.0047	0.43813	1559	12	1380.0	25.0	1778.0	37.0	1778.0	37.0	22.4
Buckhorn_53	42.3	1.193	0.890	0.035	0.0868	0.0023	0.42814	647	18	537.0	14.0	1013.0	73.0	537.0	14.0	17.0
Buckhorn_54	48.2	0.767	0.764	0.030	0.0870	0.0024	0.028721	574	17	538.0	14.0	700.0	110.0	538.0	14.0	6.3
Buckhorn_55	576	1.325	0.275	0.011	0.0348	0.0011	0.28213	246.4	9	220.2	7.1	461.0	77.0	220.2	7.1	10.6
Buckhorn_56	190.2	2.337	1.711	0.026	0.1665	0.0022	0.47241	1012.7	9.7	992.0	12.0	1018.0	28.0	992.0	12.0	2.0
Buckhorn_57	126	1.237	0.590	0.018	0.0732	0.0018	0.61018	472	11	455.0	11.0	527.0	50.0	455.0	11.0	3.6
Buckhorn_59	111	1.317	2.163	0.034	0.1986	0.0035	0.48643	1168	11	1167.0	19.0	1177.0	36.0	1167.0	19.0	0.1

Buckhorn_60	139	2.55	1.680	0.035	0.1633	0.0035	0.48834	1003	13	975.0	20.0	1042.0	41.0	975.0	20.0	2.8
Buckhorn_61	136.5	2.84	2.857	0.061	0.2285	0.0042	0.63873	1370	16	1326.0	22.0	1410.0	32.0	1410.0	32.0	6.0
Buckhorn_64	151.4	0.6738	12.370	0.160	0.4608	0.0073	0.78146	2632	12	2447.0	31.0	2771.0	15.0	2771.0	15.0	11.7
Buckhorn_65	239	0.8233	1.510	0.022	0.1521	0.0024	0.43535	933.6	8.7	916.0	14.0	986.0	31.0	916.0	14.0	1.9
Buckhorn_66	147.3	1.121	4.893	0.070	0.3185	0.0047	0.76355	1803	12	1782.0	23.0	1808.0	18.0	1808.0	18.0	1.4
Buckhorn_67	259	4.77	1.751	0.034	0.1702	0.0032	0.43651	1027	13	1013.0	17.0	1047.0	43.0	1013.0	17.0	1.4
Buckhorn_68	114.3	0.701	4.195	0.052	0.2630	0.0033	0.42066	1672	10	1505.0	17.0	1877.0	24.0	1877.0	24.0	19.8
Buckhorn_69	137	3.12	1.815	0.042	0.1574	0.0024	0.22486	1051	16	942.0	13.0	1246.0	42.0	942.0	13.0	10.4
Buckhorn_70	47.3	1.345	1.773	0.034	0.1717	0.0030	0.48257	1034	13	1023.0	17.0	1064.0	35.0	1023.0	17.0	1.1
Buckhorn_71	183.8	0.866	1.541	0.021	0.1535	0.0025	0.55383	946.2	8.2	920.0	14.0	988.0	30.0	920.0	14.0	2.8
Buckhorn_72	229	2.014	1.369	0.017	0.1441	0.0015	0.46021	875.8	7.5	867.5	8.4	902.0	26.0	867.5	8.4	0.9
Buckhorn_73	129.7	1.18	5.026	0.050	0.3245	0.0034	0.52564	1823.1	8.5	1811.0	17.0	1836.0	20.0	1836.0	20.0	1.4
Buckhorn_74	68	1.267	11.350	0.130	0.4373	0.0064	0.43124	2552	10	2337.0	28.0	2710.0	25.0	2710.0	25.0	13.8
Buckhorn_75	106	0.936	0.261	0.010	0.0368	0.0008	0.18582	234.7	8	233.1	5.2	217.0	80.0	233.1	5.2	0.7
Buckhorn_76	76	1.206	2.029	0.043	0.1852	0.0034	0.50359	1127	14	1095.0	19.0	1180.0	41.0	1095.0	19.0	2.8
Buckhorn_77	72.5	1.405	1.512	0.030	0.1501	0.0019	0.20566	935	12	902.0	11.0	1027.0	43.0	902.0	11.0	3.5
Buckhorn_78	302	12.8	0.788	0.011	0.0956	0.0013	0.28847	589.7	6.2	588.4	7.6	607.0	33.0	588.4	7.6	0.2
Buckhorn_79	83	1.098	0.760	0.021	0.0957	0.0016	0.12086	573	12	589.0	9.4	514.0	68.0	589.0	9.4	2.8
Buckhorn_80	130.3	2.26	1.818	0.028	0.1699	0.0021	0.39503	1051	10	1011.0	12.0	1120.0	32.0	1011.0	12.0	3.8
Buckhorn_81	37.9	3.57	2.163	0.056	0.1723	0.0040	0.59653	1171	19	1024.0	22.0	1450.0	47.0	1024.0	22.0	12.6
Buckhorn_82	183.4	1.533	15.190	0.120	0.5497	0.0053	0.52038	2827.6	7.7	2823.0	22.0	2840.0	14.0	2840.0	14.0	0.6
Buckhorn_83	188.5	1.714	5.075	0.044	0.3269	0.0034	0.54594	1831.3	7.4	1823.0	17.0	1839.0	18.0	1839.0	18.0	0.9
Buckhorn_84	367	2.8	2.146	0.046	0.1926	0.0034	0.76184	1162	15	1135.0	18.0	1225.0	28.0	1135.0	18.0	2.3
Buckhorn_85	155.8	2.805	4.165	0.059	0.2827	0.0040	0.53535	1666	12	1604.0	20.0	1750.0	22.0	1750.0	22.0	8.3
Buckhorn_86	169.6	1.718	0.226	0.007	0.0315	0.0009	0.16582	206.7	5.9	200.1	5.9	348.0	86.0	200.1	5.9	3.2
Buckhorn_87	136.3	1.34	1.515	0.026	0.1488	0.0027	0.56718	936	11	894.0	15.0	1003.0	34.0	894.0	15.0	4.5
Buckhorn_88	154.1	1.57	0.519	0.017	0.0631	0.0019	0.61245	425	11	394.0	12.0	597.0	59.0	394.0	12.0	7.3
Buckhorn_89	52.4	1.214	1.814	0.049	0.1742	0.0030	0.37739	1052	18	1035.0	16.0	1089.0	51.0	1035.0	16.0	1.6
Buckhorn_90	685	2.97	1.595	0.015	0.1609	0.0020	0.61542	967.8	5.8	963.0	11.0	987.0	20.0	963.0	11.0	0.5
Buckhorn_91	602	0.894	0.177	0.004	0.0251	0.0004	0.17061	164.9	3.8	159.8	2.5	239.0	61.0	159.8	2.5	3.1
Buckhorn_92	196.2	2.184	1.743	0.019	0.1705	0.0016	0.375	1024.8	6.9	1014.7	9.1	1059.0	25.0	1014.7	9.1	1.0
Buckhorn_93	41.3	0.589	3.049	0.058	0.2418	0.0036	0.44436	1418	15	1396.0	18.0	1451.0	34.0	1451.0	34.0	3.8
Buckhorn_94	110.6	1.699	8.700	0.150	0.4089	0.0085	0.68926	2306	16	2208.0	39.0	2387.0	27.0	2387.0	27.0	7.5
Buckhorn_95	310.3	0.955	0.295	0.006	0.0406	0.0006	0.19188	263.7	5	256.5	3.8	299.0	49.0	256.5	3.8	2.7
Buckhorn_96	358	2.444	4.262	0.057	0.2825	0.0049	0.72055	1685	11	1607.0	25.0	1810.0	23.0	1810.0	23.0	11.2

Buckhorn_97	146	1.732	1.616	0.023	0.1599	0.0018	0.22826	976.7	9.1	956.0	10.0	1019.0	33.0	956.0	10.0	2.1
Buckhorn_98	46.9	0.4515	13.710	0.160	0.5273	0.0078	0.54981	2730	11	2729.0	33.0	2737.0	22.0	2737.0	22.0	0.3
Buckhorn_99	266	5.24	1.667	0.024	0.1636	0.0023	0.55068	995.6	9.2	976.0	13.0	1041.0	28.0	976.0	13.0	2.0
Buckhorn_100	282	2.757	1.318	0.025	0.0996	0.0026	0.6587	856	12	612.0	15.0	1541.0	36.0	612.0	15.0	28.5
Buckhorn_101	261.5	3.33	0.624	0.008	0.0771	0.0009	0.24382	492.1	5.2	478.9	5.2	550.0	33.0	478.9	5.2	2.7
Buckhorn_102	648	2.241	0.224	0.006	0.0165	0.0006	0.59752	204.9	4.9	105.4	3.6	1604.0	49.0	DISC	DISC	48.6
Buckhorn_103	132	1.028	0.256	0.010	0.0356	0.0008	0.25164	230.6	7.8	225.4	4.9	239.0	84.0	225.4	4.9	2.3
Buckhorn_104	101.4	2.123	1.657	0.028	0.1596	0.0023	0.38945	991	11	954.0	13.0	1039.0	35.0	954.0	13.0	3.7
Buckhorn_105	84.9	1.307	3.251	0.041	0.2520	0.0035	0.38586	1469.9	9.4	1448.0	18.0	1496.0	27.0	1496.0	27.0	3.2
Buckhorn_106	152	67.3	0.432	0.022	0.0455	0.0014	0.0073938	363	15	287.0	8.8	860.0	110.0	287.0	8.8	20.9
Buckhorn_107	111.6	2.071	1.669	0.029	0.1663	0.0025	0.36356	996	11	992.0	14.0	1007.0	39.0	992.0	14.0	0.4
Buckhorn_108	248	0.867	0.253	0.007	0.0340	0.0005	0.00050924	229.1	5.3	215.6	3.3	352.0	65.0	215.6	3.3	5.9
Buckhorn_109	69.8	1.388	9.250	0.190	0.3695	0.0090	0.68493	2361	18	2025.0	42.0	2661.0	30.0	2661.0	30.0	23.9
Buckhorn_110	190	2.196	1.775	0.029	0.1749	0.0025	0.68256	1035	10	1039.0	13.0	1036.0	26.0	1039.0	13.0	0.4
Buckhorn_111	177.9	0.895	0.255	0.007	0.0370	0.0007	0.18723	230.4	5.7	234.5	4.2	212.0	65.0	234.5	4.2	1.8
Buckhorn_112	41.5	0.837	1.181	0.047	0.1201	0.0042	0.71043	793	22	730.0	24.0	923.0	57.0	730.0	24.0	7.9
Buckhorn_113	69.2	0.901	4.503	0.061	0.3032	0.0036	0.7945	1732	11	1707.0	18.0	1777.0	21.0	1777.0	21.0	3.9
Buckhorn_114	258	1.757	3.287	0.079	0.2306	0.0053	0.75437	1479	19	1337.0	28.0	1709.0	27.0	1709.0	27.0	21.8
Buckhorn_115	77	1.074	1.784	0.028	0.1715	0.0027	0.21505	1039	10	1020.0	15.0	1069.0	41.0	1020.0	15.0	1.8
Buckhorn_116	28.52	1.913	2.012	0.052	0.1786	0.0039	0.3588	1118	18	1059.0	21.0	1215.0	51.0	1059.0	21.0	5.3
Buckhorn_117	180.4	1.028	12.727	0.099	0.4973	0.0049	0.63182	2659.1	7.3	2601.0	21.0	2705.0	13.0	2705.0	13.0	3.8
Buckhorn_118	140.1	0.531	4.571	0.068	0.2946	0.0046	0.66258	1743	12	1664.0	23.0	1843.0	24.0	1843.0	24.0	9.7
Buckhorn_119	81.8	0.995	12.430	0.110	0.4842	0.0045	0.4368	2638.4	8.3	2545.0	20.0	2701.0	16.0	2701.0	16.0	5.8
Buckhorn_120	247	2.608	1.988	0.016	0.1876	0.0021	0.15215	1111.1	5.5	1108.0	11.0	1133.0	28.0	1108.0	11.0	0.3
Buckhorn_121	102.8	1.534	5.401	0.069	0.3383	0.0050	0.64152	1888	11	1877.0	24.0	1899.0	20.0	1899.0	20.0	1.2
13DMQ_1	141	0.818	0.542	0.007	0.0702	0.0007	0.16373	440.1	4.7	437.1	4.3	454.0	16.0	437.1	4.3	0.7
13DMQ_2	214.3	0.783	0.390	0.004	0.0527	0.0004	0.38224	334.1	2.6	331.3	2.3	340.0	13.0	331.3	2.3	0.8
13DMQ_3	24.67	0.9013	1.899	0.032	0.1844	0.0019	0.0041495	1079	11	1091.0	10.0	1072.0	23.0	1091.0	10.0	1.1
13DMQ_4	14.4	0.418	0.330	0.100	0.0252	0.0012	0.94338	245	44	160.2	7.8	980.0	190.0	DISC	DISC	83.7
13DMQ_5	99.9	0.792	0.960	0.120	0.0310	0.0010	0.92575	646	66	196.5	6.4	2650.0	240.0	DISC	DISC	92.6
13DMQ_6	165.2	0.7691	0.498	0.007	0.0656	0.0006	0.1946	411.5	4.5	409.8	3.8	416.0	19.0	409.8	3.8	0.4
13DMQ_7	606	2.324	0.583	0.005	0.0744	0.0005	0.56711	466.2	2.9	462.6	2.7	473.0	10.0	462.6	2.7	0.8

13DMQ_8	88	0.7133	6.483	0.054	0.3891	0.0031	0.69589	2044	7.5	2118.0	14.0	1967.5	6.3	1967.5	6.3	7.6
13DMQ_9	97.7	1.305	2.142	0.033	0.1927	0.0023	0.095402	1162	11	1136.0	12.0	1220.0	44.0	1136.0	12.0	2.2
13DMQ_10	120	0.854	0.186	0.005	0.0254	0.0003	0.34985	172.9	4.2	161.9	2.2	383.0	52.0	161.9	2.2	6.4
13DMQ_11	245	2.059	0.175	0.003	0.0258	0.0002	0.39362	163.5	2.5	163.9	1.5	144.0	23.0	163.9	1.5	0.2
13DMQ_12	173.4	1.0486	2.940	0.017	0.2476	0.0015	0.39132	1392.1	4.4	1425.8	7.7	1335.4	7.3	1335.4	7.3	6.8
13DMQ_13	29	1.142	1.945	0.027	0.1851	0.0025	0.22643	1095.9	9.3	1094.0	13.0	1103.0	19.0	1094.0	13.0	0.2
13DMQ_14	15.92	1.062	5.384	0.065	0.3471	0.0042	0.2014	1883	11	1921.0	20.0	1844.0	17.0	1844.0	17.0	4.2
13DMQ_15	186.6	1.568	0.835	0.007	0.1019	0.0007	0.19236	616.5	4.2	625.6	3.9	584.0	13.0	625.6	3.9	1.5
13DMQ_16	120.4	2.245	1.872	0.019	0.1819	0.0018	0.53982	1071.7	6.8	1077.3	9.9	1059.0	10.0	1077.3	9.9	0.5
13DMQ_17	24.81	0.598	0.457	0.019	0.0266	0.0007	0.16396	382	13	169.0	4.3	2042.0	53.0	DISC	DISC	91.7
13DMQ_18	101	1.386	2.202	0.022	0.2046	0.0020	0.401	1181.1	7.1	1200.0	11.0	1153.0	13.0	1153.0	11.0	1.6
13DMQ_19	256	2.519	4.265	0.032	0.3057	0.0027	0.85227	1686.4	6.2	1719.0	13.0	1644.0	5.7	1644.0	5.7	4.6
13DMQ_20	325	1.699	1.939	0.024	0.1830	0.0016	0.58397	1094.1	8.3	1083.2	8.8	1105.0	17.0	1083.2	8.8	1.0
13DMQ_21	238	1.498	1.881	0.015	0.1832	0.0015	0.50998	1074.7	5.3	1084.4	8.2	1051.0	9.4	1084.4	8.2	0.9
13DMQ_22	93.1	0.7015	1.822	0.017	0.1757	0.0014	0.17871	1053	6	1043.4	7.6	1064.0	17.0	1043.4	7.6	0.9
13DMQ_23	69.28	0.522	1.811	0.018	0.1769	0.0016	0.25575	1049	6.6	1050.1	8.8	1055.0	19.0	1050.1	8.8	0.1
13DMQ_24	111	2.179	1.798	0.015	0.1798	0.0014	0.34837	1044.3	5.5	1066.1	7.7	1003.0	12.0	1066.1	7.7	2.1
13DMQ_25	354	1.426	0.594	0.005	0.0756	0.0008	0.3787	473.5	3.4	469.7	5.1	488.0	16.0	469.7	5.1	0.8
13DMQ_26	82.87	0.6405	0.196	0.007	0.0251	0.0003	0.10304	181.7	5.8	159.6	2.1	522.0	53.0	159.6	2.1	12.2
13DMQ_27	475	12.7	1.601	0.012	0.1613	0.0011	0.90412	970.5	4.5	963.7	6.1	985.1	5.8	963.7	6.1	0.7
13DMQ_28	59.9	1.583	2.165	0.024	0.2008	0.0019	0.40846	1169.3	7.6	1181.0	10.0	1147.0	13.0	1181.0	10.0	1.0
13DMQ_29	87.1	1.641	1.824	0.016	0.1792	0.0013	0.27134	1053.9	5.8	1062.4	6.9	1035.0	11.0	1062.4	6.9	0.8
13DMQ_30	100.6	2.685	13.070	0.130	0.5098	0.0072	0.69289	2686	10	2655.0	31.0	2697.4	8.9	2697.4	8.9	1.6
13DMQ_31	262	1.415	1.952	0.013	0.1882	0.0012	0.54835	1098.8	4.5	1111.5	6.3	1074.5	6.5	1111.5	6.3	1.2
13DMQ_32	19	0.3934	0.176	0.010	0.0247	0.0008	0.11406	163.7	8.9	157.3	4.7	451.0	67.0	157.3	4.7	3.9
13DMQ_33	57.5	1.23	3.379	0.030	0.2608	0.0021	0.42664	1499.3	7.1	1494.0	11.0	1507.7	9.1	1507.7	9.1	0.9
13DMQ_34	301.3	1.578	0.263	0.003	0.0375	0.0003	0.11285	237.1	2.2	237.1	2.1	233.0	16.0	237.1	2.1	0.0
13DMQ_35	63.7	0.91	0.295	0.012	0.0400	0.0007	0.029568	262	9.3	252.7	4.1	426.0	72.0	252.7	4.1	3.5
13DMQ_36	82.5	0.569	0.862	0.010	0.1025	0.0009	0.33056	631.1	5.6	629.0	5.4	637.0	17.0	629.0	5.4	0.3
13DMQ_37	129.4	2.022	2.110	0.035	0.1999	0.0026	0.80289	1153	11	1175.0	14.0	1104.0	13.0	1175.0	14.0	1.9
13DMQ_38	17.7	0.3987	0.217	0.020	0.0253	0.0007	0.219	201	17	161.1	4.5	840.0	150.0	161.1	4.5	19.9
13DMQ_39	118.3	1	2.302	0.016	0.2092	0.0015	0.31612	1212.7	4.9	1224.3	7.8	1189.6	9.5	1189.6	7.8	1.0
13DMQ_40	107.5	0.738	3.483	0.024	0.2763	0.0021	0.4095	1523.2	5.3	1574.0	11.0	1452.3	9.0	1452.3	9.0	8.4
13DMQ_41	54.6	1.596	1.907	0.024	0.1884	0.0018	0.5036	1083	8.4	1114.2	9.9	1021.0	11.0	1114.2	9.9	2.9
13DMQ_42	272	2.997	1.931	0.016	0.1866	0.0014	0.74014	1091.8	5.4	1102.7	7.8	1070.5	7.4	1102.7	7.8	1.0

13DMQ_43	53.8	0.6096	13.693	0.086	0.5343	0.0032	0.41863	2728.4	5.9	2759.0	13.0	2708.4	6.7	2708.4	6.7	1.9
13DMQ_44	92	1.289	4.160	0.073	0.3024	0.0039	0.85752	1666	15	1703.0	19.0	1616.0	11.0	1616.0	11.0	5.4
13DMQ_45	101.2	1.54	1.891	0.017	0.1826	0.0015	0.013516	1078.4	6	1081.1	7.9	1051.0	16.0	1081.1	7.9	0.3
13DMQ_46	42.1	0.627	1.918	0.026	0.1878	0.0021	0.21069	1086.7	9.1	1109.0	11.0	1073.0	22.0	1109.0	11.0	2.1
13DMQ_48	328	1.355	2.259	0.015	0.2091	0.0014	0.86161	1199.5	4.8	1223.9	7.3	1161.9	8.4	1161.9	7.3	2.0
13DMQ_49	107.1	1.367	2.051	0.015	0.1987	0.0016	0.50704	1132.5	5.1	1168.0	8.4	1067.2	7.8	1168.0	8.4	3.1
13DMQ_50	301	0.763	0.196	0.004	0.0258	0.0002	0.18362	181.4	3.1	164.0	1.4	419.0	33.0	164.0	1.4	9.6
13DMQ_51	34.1	1.368	2.624	0.035	0.2293	0.0021	0.087985	1306.6	9.9	1330.0	11.0	1271.0	20.0	1271.0	20.0	4.6
13DMQ_52	127	3.57	3.495	0.037	0.2701	0.0027	0.77662	1526.5	8.1	1541.0	14.0	1494.0	9.0	1494.0	9.0	3.1
13DMQ_53	195.6	2.617	1.847	0.011	0.1788	0.0013	0.60644	1062.2	4.1	1060.3	7.1	1064.3	6.9	1060.3	7.1	0.2
13DMQ_54	161	2.24	0.877	0.012	0.1037	0.0010	0.39309	638.9	6.5	635.8	5.9	654.0	18.0	635.8	5.9	0.5
13DMQ_55	348	1.901	0.872	0.006	0.1040	0.0007	0.42834	636.5	3.4	637.5	3.9	636.7	9.5	637.5	3.9	0.2
13DMQ_56	64.6	0.529	14.199	0.069	0.5531	0.0031	0.42465	2762.9	4.6	2838.0	13.0	2716.5	4.9	2716.5	4.9	4.5
13DMQ_57	229.3	1.089	0.492	0.009	0.0633	0.0007	0.25232	405.9	5.7	395.4	4.3	455.0	25.0	395.4	4.3	2.6
13DMQ_58	10.31	1.382	2.382	0.059	0.2149	0.0034	0.17555	1236	18	1254.0	18.0	1185.0	44.0	1185.0	18.0	1.5
13DMQ_59	124	0.6	1.843	0.016	0.1822	0.0016	0.53558	1061.4	5.6	1078.9	8.5	1018.6	9.1	1078.9	8.5	1.6
13DMQ_60	34.3	0.843	0.202	0.010	0.0241	0.0005	0.11684	186.5	8.1	153.5	3.0	679.0	82.0	153.5	3.0	17.7
13DMQ_61	111.4	0.832	0.439	0.008	0.0591	0.0006	0.30894	369.5	5.3	370.3	3.9	361.0	22.0	370.3	3.9	0.2
13DMQ_62	23.5	0.723	7.182	0.091	0.3973	0.0043	0.57986	2133	11	2159.0	20.0	2115.0	12.0	2115.0	12.0	2.1
13DMQ_63	163	2.78	5.045	0.062	0.3363	0.0032	0.85306	1829	10	1869.0	15.0	1775.1	7.0	1775.1	7.0	5.3
13DMQ_64	65.1	0.704	1.104	0.046	0.0958	0.0025	0.47266	754	22	590.0	15.0	1294.0	51.0	590.0	15.0	21.8
13DMQ_64	27.13	0.4015	1.742	0.030	0.1713	0.0028	0.39686	1024	11	1019.0	15.0	1044.0	29.0	1019.0	15.0	0.5
13DMQ_66	117.7	1.531	0.571	0.008	0.0739	0.0006	0.2857	458.4	4.9	459.4	3.8	444.0	18.0	459.4	3.8	0.2
13DMQ_67	88.2	1.703	2.209	0.018	0.2006	0.0014	0.21617	1184.3	5.6	1178.5	7.4	1184.8	9.2	1178.5	7.4	0.5
13DMQ_68	244.3	3.66	4.175	0.028	0.3002	0.0024	0.66985	1668.9	5.5	1692.0	12.0	1637.3	6.2	1637.3	6.2	3.3
13DMQ_69	89.1	1.613	1.888	0.023	0.1826	0.0017	0.51182	1077.3	7.9	1080.9	9.5	1071.0	14.0	1080.9	9.5	0.3
13DMQ_70	359	0.5314	0.559	0.005	0.0726	0.0006	0.42024	450.8	3	452.0	3.4	429.0	11.0	452.0	3.4	0.3
13DMQ_71	34.2	2.344	2.154	0.030	0.2043	0.0016	0.42351	1165.7	9.7	1198.3	8.6	1126.0	13.0	1198.3	8.6	2.8
13DMQ_72	30.1	1.184	2.349	0.029	0.2125	0.0023	0.33844	1227.9	8.5	1242.0	12.0	1193.0	18.0	1193.0	12.0	1.1
13DMQ_73	51.8	0.936	3.363	0.037	0.2642	0.0028	0.60856	1495.2	8.5	1513.0	15.0	1471.0	10.0	1471.0	10.0	2.9
13DMQ_74	168	0.867	3.467	0.036	0.2770	0.0026	0.54463	1519.4	8.2	1576.0	13.0	1450.8	9.2	1450.8	9.2	8.6
13DMQ_75	44.5	0.6464	0.294	0.015	0.0255	0.0005	0.12842	262	11	162.1	3.1	1293.0	80.0	DISC	DISC	87.5
13DMQ_76	11.88	0.987	2.056	0.043	0.1930	0.0030	0.12749	1132	14	1140.0	17.0	1132.0	38.0	1140.0	17.0	0.7
13DMQ_77	118	1.439	1.868	0.017	0.1795	0.0013	0.53974	1069.7	5.9	1064.0	6.9	1078.4	8.4	1064.0	6.9	0.5
13DMQ_78	54.62	1.556	2.256	0.021	0.2056	0.0016	0.45033	1199.1	6.7	1205.2	8.6	1174.0	10.0	1174.0	8.6	0.5

13DMQ_79	81.6	1.471	1.928	0.019	0.1877	0.0015	0.56142	1090.6	6.5	1108.9	8.2	1054.0	10.0	1108.9	8.2	1.7
13DMQ_80	234.3	0.4168	0.302	0.005	0.0410	0.0004	0.21905	267.6	3.5	258.8	2.6	339.0	20.0	258.8	2.6	3.3
13DMQ_81	29.4	0.3773	0.188	0.011	0.0245	0.0005	0.22451	173.8	9	156.2	3.0	501.0	70.0	156.2	3.0	10.1
13DMQ_82	0.287	21	9.500	2.800	0.1210	0.0710	0.4482	2120	160	439.0	91.0	4610.0	160.0	DISC	DISC	90.5
13DMQ_83	85.9	0.9213	5.290	0.029	0.3447	0.0019	0.43919	1867	4.7	1908.9	9.1	1818.4	6.3	1818.4	6.3	5.0
13DMQ_84	68.8	1.524	1.897	0.022	0.1896	0.0020	0.41411	1080.5	7.9	1119.0	11.0	1006.0	14.0	1119.0	11.0	3.6
13DMQ_86	74.6	0.7048	0.652	0.009	0.0822	0.0010	0.17826	509.4	5.5	508.9	5.8	516.0	20.0	508.9	5.8	0.1
13DMQ_88	101.8	1.819	1.889	0.014	0.1861	0.0014	0.35484	1077	4.9	1100.0	7.7	1036.0	10.0	1100.0	7.7	2.1
13DMQ_89	33.4	0.739	1.886	0.022	0.1848	0.0022	0.43235	1075.8	7.7	1093.0	12.0	1045.0	15.0	1093.0	12.0	1.6
13DMQ_90	97.26	0.724	3.516	0.021	0.2757	0.0014	0.2991	1530.6	4.8	1569.8	7.3	1484.0	8.2	1484.0	8.2	5.8
13DMQ_91	259.5	2.076	1.882	0.012	0.1846	0.0012	0.43265	1074.6	4.3	1092.1	6.3	1039.0	7.3	1092.1	6.3	1.6
13DMQ_92	335	1.943	3.076	0.017	0.2561	0.0018	0.58198	1426.5	4.2	1469.7	9.4	1359.5	6.5	1359.5	6.5	8.1
13DMQ_93	83.8	0.993	2.109	0.019	0.2020	0.0013	0.27172	1151.3	6.1	1186.2	7.1	1100.0	11.0	1186.2	7.1	3.0
13DMQ_94	87.9	0.602	13.808	0.093	0.5461	0.0046	0.9079	2737.3	6.6	2809.0	19.0	2684.4	5.5	2684.4	5.5	4.6
13DMQ_95	104.7	1.293	4.927	0.032	0.3354	0.0021	0.56159	1806.6	5.5	1864.0	10.0	1746.7	5.9	1746.7	5.9	6.7
13DMQ_96	290	1.632	4.550	0.280	0.2711	0.0029	0.51445	1717	48	1546.0	15.0	1917.0	93.0	1917.0	93.0	19.4
13DMQ_98	84.9	1.614	1.953	0.020	0.1928	0.0015	0.29202	1099.2	6.9	1136.3	8.2	1026.0	13.0	1136.3	8.2	3.4
13DMQ_99	99.2	1.099	0.184	0.005	0.0261	0.0004	0.094641	171.3	3.8	165.8	2.3	314.0	51.0	165.8	2.3	3.2
13DMQ_100	48.5	1.256	2.310	0.046	0.1985	0.0019	0.34465	1215	14	1167.0	10.0	1293.0	33.0	1167.0	10.0	4.0
13DMQ_101	29.25	0.5036	0.188	0.010	0.0247	0.0005	0.14166	175.7	8	157.0	3.2	494.0	90.0	157.0	3.2	10.6
13DMQ_102	213	0.77	2.025	0.026	0.1891	0.0027	0.56778	1124.4	8.5	1116.0	15.0	1131.0	14.0	1116.0	15.0	0.7
13DMQ_104	333	4.555	0.867	0.007	0.1028	0.0008	0.65474	633.9	3.9	630.8	4.6	642.4	8.5	630.8	4.6	0.5
13DMQ_105	53.6	0.766	2.242	0.093	0.2035	0.0030	0.48985	1192	29	1194.0	16.0	1200.0	78.0	1194.0	16.0	0.2
13DMQ_106	410	0.489	0.173	0.002	0.0252	0.0002	0.094634	161.9	2	160.6	1.4	190.0	22.0	160.6	1.4	0.8
13DMQ_108	174.1	2.401	0.778	0.007	0.0946	0.0006	0.065793	584.6	4	582.8	3.4	591.0	13.0	582.8	3.4	0.3
13DMQ_109	159.3	0.6199	0.569	0.009	0.0732	0.0009	0.68035	457	5.5	455.1	5.4	458.0	16.0	455.1	5.4	0.4
13DMQ_110	106	2.104	1.920	0.015	0.1879	0.0017	0.6304	1087.7	5.3	1109.8	9.2	1049.8	8.9	1109.8	9.2	2.0
13DMQ_112	324	0.8863	0.488	0.005	0.0631	0.0004	0.095864	403.5	3.3	394.2	2.2	464.0	13.0	394.2	2.2	2.3
13DMQ_113	260	0.613	3.382	0.019	0.2666	0.0017	0.51827	1500	4.4	1523.6	8.7	1464.2	6.8	1464.2	6.8	4.1
13DMQ_115	227.3	2.282	1.833	0.015	0.1810	0.0017	0.55921	1057.9	5.7	1072.1	9.4	1034.0	11.0	1072.1	9.4	1.3
13DMQ_116	63.3	0.663	0.187	0.007	0.0254	0.0004	0.42552	173.6	5.5	161.8	2.7	349.0	55.0	161.8	2.7	6.8
13DMQ_117	283	1.901	1.900	0.017	0.1854	0.0019	0.57799	1080.9	5.9	1096.0	10.0	1051.0	11.0	1096.0	10.0	1.4
13DMQ_118	145.9	0.946	18.030	0.110	0.6186	0.0045	0.66646	2990.9	5.7	3106.0	18.0	2913.5	5.2	2913.5	5.2	6.6

Table 2d: Zircon U-Pb Ages And Isotopic Data: Chapter 5

Table 2d: Los Molles and Las Lajas Formations

Sample Name:								**207/235**		**206/238**		**207/206**		**Best age**		
Grain #	**[U] ppm**	**U/Th**	**207/235**	**2σ error**	**206/238**	**2σ error**	**RHO**	**Age Ma**	**2σ error**	**Age (Ma)**	**2σ error**	**Age (Ma)**	**2σ error**	**(Ma)**	**2σ error**	**% Discordance***
VR5A_1	125.6	2.05	0.2986	0.0086	0.04278	0.00084	0.027	264.9	6.8	270	5.2	230	67	270	5.2	1.9
VR5A_2	324	3.2	0.3222	0.0066	0.0454	0.00066	0.257	283.3	5	286.2	4.1	262	49	286.2	4.1	1.0
VR5A_3	161	1.73	0.1944	0.0074	0.02791	0.00051	0.009	180	6.2	177.5	3.2	222	80	177.5	3.2	1.4
VR5A_5	628	67	0.3167	0.0099	0.0451	0.0018	0.371	279.2	7.7	285	11	291	81	285	11	2.1
VR5A_5	172.7	3.2	0.797	0.03	0.0922	0.0024	0.380	595	17	569	14	730	76	569	14	4.4
VR5A_6	230	35	0.424	0.017	0.0552	0.0016	0.593	358	12	346	10	413	81	346	10	3.4
VR5A_6	343	2.281	0.4847	0.0086	0.0647	0.00066	0.040	402.2	5.6	404.1	4	414	37	404.1	4	0.5
VR5A_7	107.8	0.714	0.251	0.011	0.03502	0.00089	0.153	226.6	9.3	221.8	5.6	300	110	221.8	5.6	2.1
VR5A_8	106.5	0.891	0.2301	0.0095	0.03065	0.00072	0.060	209.7	7.8	195.2	4.6	370	96	195.2	4.6	6.9
VR5A_9	90.8	0.829	0.2153	0.0082	0.02986	0.00065	0.135	197.6	6.9	189.6	4.1	352	85	189.6	4.1	4.0
VR5A_10	208	1.619	0.1913	0.0052	0.02776	0.00047	0.326	177.6	4.4	176.5	2.9	207	56	176.5	2.9	0.6
VR5A_11	263	1.89	0.208	0.019	0.0289	0.0014	0.130	191	16	183.8	9.1	290	220	183.8	9.1	3.8
VR5A_11	254	6.7	0.449	0.013	0.0591	0.0015	0.005	376	9.4	369.8	9.3	396	69	369.8	9.3	1.6
VR5A_12	268	1.421	0.1929	0.0058	0.02794	0.00048	0.422	178.9	5	177.7	3	193	64	177.7	3	0.7
VR5A_13	299.9	0.814	0.1954	0.0056	0.02885	0.0004	0.184	181.1	4.8	183.3	2.5	166	62	183.3	2.5	1.2
VR5A_14	240	1.261	0.3026	0.0069	0.04076	0.00096	0.512	268.2	5.4	257.5	5.9	372	51	257.5	5.9	4.0
VR5A_15	642	11.7	0.4493	0.0058	0.05831	0.00062	0.533	376.6	4	365.3	3.8	443	27	365.3	3.8	3.0
VR5A_16	135.9	1.525	0.1818	0.0062	0.02855	0.00056	0.139	169.3	5.3	181.5	3.5	75	82	181.5	3.5	7.2
VR5A_17	666	0.973	0.2939	0.0046	0.04154	0.00052	0.424	262	3.5	262.4	3.2	244	35	262.4	3.2	0.2
VR5A_18	226	11.58	0.3061	0.0065	0.04305	0.00056	0.162	271.6	5.2	272.1	3.6	285	55	272.1	3.6	0.2
VR5A_19	71	0.831	0.319	0.018	0.0439	0.0011	0.009	280	14	277.1	7	370	130	277.1	7	1.0
VR5A_19	62.2	1.761	0.356	0.022	0.0485	0.0022	0.199	308	17	305	14	370	150	305	14	1.0
VR5A_20	443	10.1	0.2992	0.0052	0.04197	0.00054	0.506	265.7	4.1	265	3.3	313	40	265	3.3	0.3
VR5A_21	198.5	3.44	0.303	0.011	0.04247	0.00092	0.298	268.8	8.3	268.1	5.7	283	89	268.1	5.7	0.3

VR5A_22	341.4	0.81	0.2469	0.0063	0.03122	0.00063	0.027	223.9	5.1	198.1	3.9	445	61	198.1	3.9	11.5
VR5A_23	491	5.9	0.5508	0.0076	0.07141	0.00074	0.578	445.3	5	444.6	4.5	456	25	444.6	4.5	0.2
VR5A_24	59.8	0.558	0.258	0.014	0.03162	0.00081	0.095	232	11	200.7	5.1	510	120	200.7	5.1	13.5
VR5A_25	657	2.55	0.4522	0.0057	0.0604	0.00078	0.413	379.2	3.9	378	4.8	389	28	378	4.8	0.3
VR5A_26	201.4	0.6249	0.2172	0.0061	0.03157	0.00053	0.183	199.4	5.1	200.3	3.3	224	61	200.3	3.3	0.5
VR5A_27	47.3	0.586	0.239	0.014	0.03187	0.00092	0.088	216	11	202.2	5.7	330	110	202.2	5.7	6.4
VR5A_28	126	2	0.293	0.011	0.04103	0.00074	0.325	259.9	8.4	259.2	4.6	236	75	259.2	4.6	0.3
VR5A_29	116.9	0.6932	0.2194	0.0097	0.0313	0.00065	0.383	201	8.1	198.6	4.1	239	91	198.6	4.1	1.2
VR5A_30	280	1	0.3051	0.0073	0.04193	0.00061	0.242	270.1	5.7	264.8	3.8	321	52	264.8	3.8	2.0
VR5A_31	76.9	0.891	0.302	0.012	0.04236	0.00099	0.204	269.2	9	267.4	6.1	304	80	267.4	6.1	0.7
VR5A_32	218.8	2.2	0.3066	0.0073	0.04117	0.00072	0.234	271.3	5.7	260.1	4.5	356	62	260.1	4.5	4.1
VR5A_34	456	1.583	0.1878	0.0041	0.02746	0.00056	0.130	174.7	3.5	174.6	3.5	197	65	174.6	3.5	0.1
VR5A_35	192	0.883	0.1925	0.008	0.02656	0.00069	0.142	179.6	7	169	4.4	316	96	169	4.4	5.9
VR5A_37	364	5.09	0.2993	0.0061	0.0408	0.00046	0.352	265.7	4.8	258.2	2.8	339	42	258.2	2.8	2.8
VR5A_38	474	1.058	0.2985	0.0053	0.04157	0.00034	0.151	265.1	4.2	262.6	2.1	292	43	262.6	2.1	0.9
VR5A_39	354	1.086	0.307	0.0071	0.0429	0.00049	0.156	272.4	5.3	270.8	3	292	49	270.8	3	0.6
VR5A_40	194	1.587	0.1899	0.0059	0.0275	0.00042	0.091	176.3	5	174.8	2.6	208	72	174.8	2.6	0.9
VR5A_41	615	1.041	0.203	0.0074	0.02552	0.00064	0.580	187.4	6.2	162.4	4	516	65	162.4	4	13.3
VR5A_42	123	1.597	1.826	0.026	0.1729	0.0021	0.411	1054.1	9.4	1030	11	1087	31	1087	31	5.2
VR5A_43	219.2	0.637	0.1786	0.0075	0.02657	0.0005	0.227	166.6	6.5	169	3.1	147	86	169	3.1	1.4
VR5A_44	83.6	0.47	0.261	0.012	0.03471	0.00077	0.267	237.5	9.9	220	4.8	420	100	220	4.8	7.4
VR5A_45	292	1.078	0.239	0.01	0.02935	0.00049	0.432	217.1	8.3	186.5	3.1	542	84	186.5	3.1	14.1
VR5A_46	520	1.166	0.2792	0.0053	0.03806	0.00078	0.357	249.9	4.2	240.8	4.8	344	52	240.8	4.8	3.6
VR5A_47	101.8	1.109	0.32	0.016	0.0426	0.001	0.033	280	12	268.7	6.4	400	100	268.7	6.4	4.0
VR5A_48	70.5	1.401	0.381	0.023	0.0504	0.0016	0.013	327	17	317	10	440	160	317	10	3.1
VR5A_49	85.1	1.153	0.1658	0.0091	0.02424	0.00062	0.054	155.4	7.9	154.4	3.9	190	110	154.4	3.9	0.6
VR5A_50	67.8	4.79	0.267	0.011	0.03849	0.00092	0.226	240.6	8.8	243.4	5.7	230	84	243.4	5.7	1.2
VR5A_51	141	1.435	0.1952	0.0071	0.02821	0.00055	0.179	180.8	6.1	179.3	3.4	184	72	179.3	3.4	0.8
VR5A_52	191	0.851	0.308	0.012	0.03653	0.00056	0.071	271.5	9.2	231.3	3.5	600	93	231.3	3.5	14.8
VR5A_53	224	2.149	0.2019	0.0062	0.0289	0.0006	0.224	186.5	5.2	183.6	3.7	228	68	183.6	3.7	1.6

VR5A_54	566	3.26	0.3149	0.004	0.04242	0.00053	0.248	277.9	3.1	267.8	3.3	374	36	267.8	3.3	3.6
VR5A_55	428	1.371	0.3814	0.0087	0.0438	0.0011	0.266	327.9	6.4	276.3	7	715	65	276.3	7	15.7
VR5A_56	205.2	2.745	0.2933	0.0072	0.04141	0.00076	0.240	260.9	5.7	261.6	4.7	254	58	261.6	4.7	0.3
VR5A_57	74.9	0.594	0.233	0.013	0.03173	0.00061	0.036	212	11	201.4	3.8	310	130	201.4	3.8	5.0
VR5A_58	501	0.773	0.2306	0.0068	0.02505	0.00064	0.409	210.6	5.7	159.5	4	789	61	DISC	DISC	24.3
VR5A_59	211.7	0.728	0.1822	0.0055	0.02587	0.00045	0.040	169.8	4.7	165	2.8	218	78	165	2.8	2.8
VR5A_60	416	1.93	0.3512	0.0074	0.0478	0.00058	0.470	305.4	5.6	301	3.6	340	48	301	3.6	1.4
VR5A_61	82	0.719	0.273	0.014	0.0369	0.0011	0.158	246	11	233.8	7	320	120	233.8	7	5.0
VR5A_62	512	2.02	0.2846	0.0066	0.03905	0.00074	0.204	255	5.1	246.9	4.6	315	54	246.9	4.6	3.2
VR5A_63	577	1.266	0.2626	0.0057	0.03625	0.00054	0.452	236.6	4.6	229.6	3.3	320	43	229.6	3.3	3.0
VR5A_64	169.6	1.97	0.2944	0.0099	0.04113	0.00083	0.059	261.5	7.7	259.8	5.2	280	78	259.8	5.2	0.7
VR5A_65	108	1.59	0.272	0.011	0.03616	0.00092	0.206	244	8.5	229	5.7	429	83	229	5.7	6.1
VR5A_66	268	2.54	0.3301	0.0077	0.04237	0.00087	0.329	290.1	6	267.5	5.4	460	57	267.5	5.4	7.8
VR5A_68	166	1.0723	0.3254	0.0077	0.04537	0.00063	0.078	285.8	5.9	286	3.9	271	61	286	3.9	0.1
VR5A_70	630	3.9	0.3045	0.006	0.04171	0.00056	0.418	269.7	4.7	263.4	3.5	335	43	263.4	3.5	2.3
VR5A_71	514	0.953	0.2854	0.0046	0.04013	0.00045	0.290	255.3	3.5	253.6	2.8	278	41	253.6	2.8	0.7
VR5A_72	152.3	0.683	0.1752	0.0057	0.02546	0.00052	0.004	163.8	4.9	162.1	3.3	152	77	162.1	3.3	1.0
VR5A_73	591	1.311	0.1962	0.004	0.02666	0.0006	0.303	181.8	3.4	169.6	3.8	355	55	169.6	3.8	6.7
VR5A_74	228	3.8	0.2944	0.0067	0.04092	0.00075	0.028	261.8	5.3	258.5	4.7	271	61	258.5	4.7	1.3
VR5A_75	312.7	1.962	0.3259	0.0063	0.04424	0.00047	0.170	286.2	4.8	279	2.9	340	44	279	2.9	2.5
VR5A_76	124.1	1.119	0.235	0.016	0.02769	0.00055	0.017	215	13	176.1	3.5	610	150	176.1	3.5	18.1
VR5A_77	894	8.05	0.4207	0.0071	0.05649	0.00066	0.579	356.4	5	354.2	4	383	31	354.2	4	0.6
VR5A_78	777	9.7	0.2876	0.0074	0.0399	0.0011	0.861	257.2	5.7	252	7.1	333	39	252	7.1	2.0
VR5A_79	279	1.127	0.2956	0.0061	0.042	0.00056	0.168	262.8	4.8	265.2	3.4	240	50	265.2	3.4	0.9
VR5A_80	409	34.9	0.2989	0.0051	0.0419	0.00048	0.322	265.4	4	264.6	3	284	41	264.6	3	0.3
VR5A_81	1179	3.29	0.2765	0.0064	0.03557	0.00079	0.514	247.8	5.1	225.3	4.9	479	58	225.3	4.9	9.1
VR5A_81	539	3.48	0.3198	0.006	0.04249	0.0005	0.139	281.6	4.6	268.2	3.1	388	46	268.2	3.1	4.8
VR5A_82	217.4	1.673	0.1967	0.0057	0.02858	0.00041	0.267	182.1	4.8	181.6	2.6	191	62	181.6	2.6	0.3
VR5A_83	182	5.2	0.3287	0.0077	0.04547	0.00063	0.299	289.1	5.7	286.6	3.9	311	57	286.6	3.9	0.9
VR5A_84	197.8	4.56	0.295	0.0071	0.04171	0.00059	0.125	262.2	5.6	263.4	3.7	260	55	263.4	3.7	0.5

VR5A_85	647	9.06	0.3097	0.0041	0.04379	0.00034	0.342	274.2	3.1	276.3	2.1	268	28	276.3	2.1	0.8
VR5A_86	203	1.754	0.1837	0.0061	0.0264	0.0004	0.005	171.7	5.1	168	2.5	229	78	168	2.5	2.2
VR5A_87	189	1.47	0.3012	0.0078	0.04111	0.00056	0.157	267.8	5.9	259.7	3.5	312	65	259.7	3.5	3.0
VR5A_88	344	1.283	0.3034	0.0052	0.04273	0.00045	0.139	269.4	4.2	269.8	2.8	277	43	269.8	2.8	0.1
VR5A_89	268	1.146	0.3086	0.007	0.04107	0.00046	0.213	272.8	5.5	259.4	2.9	384	53	259.4	2.9	4.9
VR5A_90	235	0.657	0.2103	0.0069	0.02971	0.00049	0.117	193.5	5.8	188.7	3.1	218	73	188.7	3.1	2.5
VR5A_91	176	0.872	0.297	0.011	0.03879	0.0007	0.252	263.4	8.3	245.3	4.4	407	78	245.3	4.4	6.9
VR5A_92	117.9	1.153	0.2764	0.0097	0.03695	0.00069	0.187	247.3	7.7	233.9	4.3	363	78	233.9	4.3	5.4
VR5A_93	49.3	1.125	0.185	0.011	0.02713	0.00085	0.013	171.5	9.3	172.5	5.3	160	120	172.5	5.3	0.6
VR5A_94	309	1.682	0.3117	0.0059	0.04257	0.00067	0.343	275.3	4.5	268.7	4.1	316	47	268.7	4.1	2.4
VR5A_95	213	8.1	0.3107	0.0081	0.04313	0.00052	0.130	275.1	6.4	272.2	3.2	300	60	272.2	3.2	1.1
VR5A_96	252.3	5.37	0.3349	0.009	0.04319	0.00073	0.220	294.3	7.1	272.6	4.5	485	58	272.6	4.5	7.4
VR5A_97	354	7.7	0.378	0.012	0.0456	0.00084	0.390	325.1	9	287.5	5.2	589	62	287.5	5.2	11.6
VR5A_98	222	3.04	0.2973	0.0076	0.03952	0.00062	0.342	264	5.9	249.8	3.8	410	60	249.8	3.8	5.4
VR5A_99	154.6	0.886	0.1993	0.008	0.02844	0.00049	0.023	184.1	6.7	180.7	3.1	206	86	180.7	3.1	1.8
VR5A_100	168.4	1.684	0.192	0.013	0.02621	0.00065	0.023	178	11	166.8	4.1	260	150	166.8	4.1	6.3
VR5A_101	202	0.989	0.1985	0.0077	0.02806	0.00056	0.399	184.5	6.3	178.4	3.5	319	86	178.4	3.5	3.3
VR5A_102	214.7	0.823	0.2429	0.0064	0.03363	0.00065	0.348	220.6	5.2	213.2	4	306	58	213.2	4	3.4
VR5A_103	136	2.45	0.338	0.014	0.04388	0.00088	0.439	295	10	276.8	5.4	442	81	276.8	5.4	6.2
VR5A_104	293.4	1.659	0.31	0.0075	0.04295	0.00064	0.260	273.9	5.8	271.1	4	308	55	271.1	4	1.0
VR5A_105	101.6	0.865	0.263	0.012	0.03687	0.00081	0.165	236.2	9.4	233.3	5.1	270	100	233.3	5.1	1.2
VR5A_106	79.4	1.523	0.235	0.021	0.0293	0.0013	0.163	214	17	186	8.4	480	210	186	8.4	13.1
VR5A_107	176.9	2.32	0.3147	0.0084	0.04365	0.00055	0.123	277.4	6.5	275.4	3.4	286	61	275.4	3.4	0.7
VR5A_108	78.3	0.874	0.182	0.013	0.02573	0.00089	0.115	171	12	163.8	5.6	230	150	163.8	5.6	4.2
VR5A_109	94.2	2.252	0.3111	0.0099	0.04329	0.00084	0.076	274.5	7.7	273.2	5.2	294	78	273.2	5.2	0.5
VR5A_110	102.6	1.271	0.1978	0.0085	0.0285	0.00056	0.085	183.7	7.1	181.2	3.5	221	98	181.2	3.5	1.4
VR5A_111	399	3.425	0.2071	0.004	0.03019	0.00044	0.027	191.5	3.4	191.7	2.7	196	50	191.7	2.7	0.1
VR5A_112	256	4.09	0.2942	0.0092	0.0399	0.001	0.512	261.5	7.2	252.2	6.5	330	60	252.2	6.5	3.6
VR5A_114	65.1	0.819	0.224	0.011	0.03154	0.00087	0.108	204.4	9.5	200.2	5.4	240	100	200.2	5.4	2.1
VR5A_115	241	1.779	0.2768	0.007	0.0383	0.00072	0.146	248.8	5.5	242.3	4.4	320	67	242.3	4.4	2.6

VR5A_116	270	0.618	0.3568	0.0071	0.04895	0.0006	0.258	309.5	5.3	308	3.7	318	38	308	3.7	0.5
VR5A_117	1460	12.9	0.387	0.019	0.0479	0.0015	0.106	331	13	301.7	9.3	580	140	301.7	9.3	8.9
VR5A_118	90.8	2.47	0.2664	0.0079	0.03821	0.00079	0.022	240.3	6.5	241.7	4.9	183	70	241.7	4.9	0.6
VR5A_119	371	3.299	0.2872	0.0058	0.0403	0.00055	0.297	257.3	4.6	254.7	3.4	261	45	254.7	3.4	1.0
VR5A_120	301	4.62	0.2948	0.0058	0.04111	0.00065	0.219	263.5	4.8	259.7	4	297	45	259.7	4	1.4
VR5A_121	204.5	0.963	0.3096	0.0061	0.04289	0.00053	0.086	273.7	4.7	270.7	3.2	288	54	270.7	3.2	1.1
VR5A_122	639	17.5	0.2949	0.0045	0.04099	0.00047	0.182	262.3	3.5	259	2.9	286	41	259	2.9	1.3
VR5A_124	346	1.99	0.2962	0.0053	0.04129	0.00061	0.213	263.2	4.2	261.3	3.7	263	47	261.3	3.7	0.7
VR5A_126	187.4	0.833	0.1926	0.0069	0.02741	0.00055	0.076	178.5	5.8	174.3	3.5	208	81	174.3	3.5	2.4
VR5A_127	356	3.1	0.1986	0.0085	0.02895	0.00072	0.054	183.7	7.2	184	4.5	164	80	184	4.5	0.2
VR5A_127	253.8	2.428	0.96	0.037	0.0964	0.0037	0.188	683	19	593	22	990	110	593	22	13.2
VR5A_128	283	1.57	0.307	0.01	0.04272	0.00099	0.222	271.6	7.8	269.6	6.1	265	80	269.6	6.1	0.7
VR5A_129	747	4.79	0.3445	0.0092	0.0446	0.0012	0.403	300.3	6.9	281	7.2	434	45	281	7.2	6.4
VR5A_129	191	0.94	0.657	0.044	0.0785	0.0039	0.517	511	27	487	23	620	130	487	23	4.7
VR5A_130	546	3.22	0.3192	0.009	0.04539	0.00067	0.059	281.1	6.9	286.1	4.1	244	70	286.1	4.1	1.8
VR5A_130	142.7	1.716	0.634	0.029	0.0494	0.0013	0.289	497	18	310.8	8	1540	100	DISC	DISC	37.5
VR3A_1	252	0.973	0.3545	0.0084	0.05113	0.00082	0.031	309.7	6.3	321.4	5	238	62	321.4	5	3.8
VR3A_2	233.8	0.5754	0.4121	0.0096	0.05489	0.00086	0.188	351	7.1	344.4	5.3	384	60	344.4	5.3	1.9
VR3A_3	228	0.87	0.2261	0.0087	0.03016	0.00052	0.361	206.7	7.2	191.6	3.2	381	82	191.6	3.2	7.3
VR3A_4	215	2.08	0.483	0.036	0.04362	0.0006	0.389	400	25	275.2	3.7	1170	140	DISC	DISC	31.2
VR3A_5	420	7.2	0.3107	0.005	0.0435	0.00051	0.284	275.5	3.8	274.5	3.2	297	37	274.5	3.2	0.4
VR3A_6	200.5	0.999	0.2786	0.0056	0.03848	0.00065	0.259	249.3	4.5	243.4	4	294	54	243.4	4	2.4
VR3A_7	840	4.816	0.1973	0.0037	0.02839	0.00037	0.476	182.8	3.1	180.4	2.3	218	39	180.4	2.3	1.3
VR3A_8	183	1.407	0.1955	0.0052	0.02783	0.00062	0.136	181.1	4.4	177	3.9	257	77	177	3.9	2.3
VR3A_9	188	1.171	0.2242	0.0091	0.02938	0.00055	0.148	204.9	7.5	186.7	3.4	440	110	186.7	3.4	8.9
VR3A_10	177	1.41	0.1945	0.0059	0.02805	0.00056	0.168	180.2	5	178.3	3.5	202	74	178.3	3.5	1.1
VR3A_11	256	0.846	0.2045	0.0097	0.02871	0.00049	0.133	188.3	8	182.5	3.1	240	84	182.5	3.1	3.1
VR3A_12	93	1.37	0.297	0.01	0.0428	0.0011	0.360	263.1	8.2	270	6.6	184	72	270	6.6	2.6

VR3A_13	139	0.83	0.241	0.013	0.03327	0.00061	0.051	218	10	210.9	3.8	263	86	210.9	3.8	3.3
VR3A_14	810	28.37	0.316	0.0052	0.04514	0.00068	0.279	278.7	4	284.6	4.2	249	40	284.6	4.2	2.1
VR3A_16	517	1.255	0.336	0.0049	0.04716	0.00059	0.185	294.6	3.8	297	3.6	298	38	297	3.6	0.8
VR3A_17	202	1.312	0.1861	0.0055	0.02719	0.00046	0.117	173.8	4.6	172.9	2.9	192	72	172.9	2.9	0.5
VR3A_18	327	1.705	0.2069	0.006	0.02773	0.0006	0.124	190.8	5	176.3	3.7	448	72	176.3	3.7	7.6
VR3A_19	750	10.7	0.3157	0.006	0.04377	0.00078	0.583	279	4.5	276.1	4.8	324	37	276.1	4.8	1.0
VR3A_20	464	6.41	0.2957	0.0052	0.04145	0.00048	0.115	262.9	4.1	261.8	3	286	40	261.8	3	0.4
VR3A_21	199	2.8	0.3023	0.0087	0.04039	0.00079	0.191	267.9	6.7	255.3	4.9	399	64	255.3	4.9	4.7
VR3A_22	221	1.968	0.1977	0.0078	0.02776	0.00059	0.027	183	6.6	176.5	3.7	287	99	176.5	3.7	3.6
VR3A_23	109.6	0.869	0.2713	0.0097	0.03264	0.00071	0.023	243.3	7.8	207	4.4	630	95	207	4.4	14.9
VR3A_24	13.78	0.3251	0.28	0.031	0.0308	0.0025	0.159	248	24	196	15	770	270	DISC	DISC	21.0
VR3A_25	271.6	1.219	0.3451	0.009	0.04271	0.00059	0.122	301.5	6.9	269.6	3.7	546	61	269.6	3.7	10.6
VR3A_26	762	2.483	0.3187	0.0086	0.03447	0.00064	0.370	280.6	6.6	218.4	4	822	91	DISC	DISC	22.2
VR3A_27	300.2	1.47	0.3058	0.006	0.04236	0.00058	0.288	270.7	4.7	267.4	3.6	318	46	267.4	3.6	1.2
VR3A_28	134	0.72	0.272	0.023	0.0293	0.0019	0.326	244	18	186	12	850	200	DISC	DISC	23.8
VR3A_28	74	3.32	1.152	0.08	0.1152	0.0065	0.771	776	37	702	38	969	87	702	38	9.5
VR3A_29	203.5	1.967	0.1951	0.0075	0.02777	0.00042	0.209	181.8	6.1	176.6	2.6	250	82	176.6	2.6	2.9
VR3A_32	130.7	0.937	0.385	0.012	0.0509	0.0012	0.158	330.1	8.4	319.9	7.5	351	74	319.9	7.5	3.1
VR3A_33	271	2.12	0.3423	0.0068	0.04522	0.00076	0.167	298.7	5.1	285.1	4.7	367	50	285.1	4.7	4.6
VR3A_34	114	1.09	0.291	0.0081	0.03809	0.0009	0.207	259	6.4	241	5.6	407	72	241	5.6	6.9
VR3A_35	151.6	0.801	0.2919	0.0097	0.0395	0.0006	0.437	259.5	7.6	249.7	3.7	317	72	249.7	3.7	3.8
VR3A_36	714	1.704	0.3608	0.0083	0.04484	0.00059	0.345	312.5	6.2	282.8	3.7	483	48	282.8	3.7	9.5
VR3A_37	186	1.53	0.355	0.02	0.0408	0.0013	0.024	306	15	257.6	8	600	130	257.6	8	15.8
VR3A_38	1478	3.72	0.3767	0.0039	0.04234	0.00033	0.201	324.5	2.9	267.3	2.1	712	26	267.3	2.1	17.6
VR3A_38	603	4.5	0.3921	0.0079	0.0472	0.001	0.131	337.5	6.4	297.4	6.4	584	63	297.4	6.4	11.9
VR3A_39	190	0.886	0.3397	0.0079	0.04599	0.00078	0.173	296.6	6	289.8	4.8	308	55	289.8	4.8	2.3
VR3A_41	371	4.16	0.3187	0.0054	0.04371	0.0007	0.431	280.7	4.2	276.3	4.2	280	39	276.3	4.2	1.6
VR3A_44	320	1.46	0.2057	0.0052	0.03028	0.0003	0.219	190.3	4.3	192.3	1.8	150	56	192.3	1.8	1.1
VR3A_45	363	1.695	0.3295	0.0062	0.04401	0.00049	0.442	289.6	4.8	277.6	3	343	37	277.6	3	4.1
VR3A_48	192.7	0.729	0.2832	0.0081	0.03904	0.00064	0.024	252.8	6.4	246.9	4	299	61	246.9	4	2.3

VR3A_51	124.4	1.096	0.2032	0.0093	0.02727	0.00057	0.180	187.4	7.9	173.4	3.6	336	87	173.4	3.6	7.5
VR3A_53	208.3	3.37	0.3023	0.008	0.04291	0.00069	0.017	267.8	6.2	270.8	4.2	233	54	270.8	4.2	1.1
VR3A_54	298.2	0.7393	0.297	0.0058	0.03979	0.00058	0.416	263.8	4.5	251.5	3.6	333	46	251.5	3.6	4.7
VR3A_55	602	5.29	0.3191	0.0061	0.04456	0.00052	0.485	281.6	4.6	281	3.2	311	40	281	3.2	0.2
VR3A_56	133.5	0.7155	0.2242	0.0093	0.03357	0.00063	0.103	206.7	7.7	212.8	3.9	129	96	212.8	3.9	3.0
VR3A_57	126	0.774	0.2571	0.0099	0.03473	0.00081	0.226	231.8	8	220	5.1	317	81	220	5.1	5.1
VR3A_58	376	24.7	0.2935	0.0051	0.0409	0.00042	0.383	261.1	4	258.4	2.6	300	37	258.4	2.6	1.0
VR3A_59	244	1.024	0.265	0.02	0.0321	0.0013	0.389	238	16	203.9	8.4	600	140	203.9	8.4	14.3
VR3A_59	280	3.9	0.3231	0.006	0.04436	0.00058	0.219	284.9	4.4	279.8	3.6	327	43	279.8	3.6	1.8
VR3A_60	238	2.742	0.2039	0.0052	0.02915	0.00032	0.175	188.2	4.4	185.2	2	223	61	185.2	2	1.6
VR3A_61	809	2.48	0.3159	0.0042	0.04358	0.00042	0.024	278.7	3.3	275	2.6	325	37	275	2.6	1.3
VR3A_62	513	1.7	0.2137	0.0045	0.03009	0.00039	0.304	196.5	3.7	191.1	2.4	259	46	191.1	2.4	2.7
VR3A_63	316	1.53	0.3204	0.0055	0.04362	0.00056	0.167	282.1	4.3	275.7	3.4	351	46	275.7	3.4	2.3
VR3A_64	74.8	1.386	0.335	0.021	0.0441	0.0011	0.636	288	14	278	6.5	360	100	278	6.5	3.5
VR3A_65	97.9	1.237	0.1776	0.008	0.02602	0.00063	0.132	165.7	6.9	165.6	4	180	110	165.6	4	0.1
VR3A_66	228	2.268	0.1941	0.0059	0.02802	0.00048	0.188	179.9	5	178.1	3	212	64	178.1	3	1.0
VR3A_68	780	1.348	0.2094	0.0045	0.03	0.00054	0.439	192.9	3.8	190.5	3.4	240	45	190.5	3.4	1.2
VR3A_69	183.5	2.406	0.208	0.0054	0.02983	0.00054	0.373	191.7	4.5	189.5	3.4	221	56	189.5	3.4	1.1
VR3A_70	215	0.948	0.2434	0.007	0.03336	0.0005	0.124	220.9	5.8	211.5	3.1	310	64	211.5	3.1	4.3
VR3A_71	145	2.05	0.3048	0.0088	0.04234	0.00083	0.160	269.7	6.8	267.3	5.1	274	70	267.3	5.1	0.9
VR3A_72	207.4	2.09	0.217	0.0058	0.03105	0.00072	0.234	199.3	4.9	197.1	4.5	206	71	197.1	4.5	1.1
VR3A_73	500	1.02	0.3132	0.0054	0.04333	0.00063	0.465	276.6	4.2	273.4	3.9	336	42	273.4	3.9	1.2
VR3A_74	39	1.06	0.188	0.012	0.02651	0.00092	0.045	174	10	168.6	5.8	230	120	168.6	5.8	3.1
VR3A_75	858	1.99	0.373	0.012	0.0382	0.0011	0.383	321.4	9.2	241.6	6.7	957	64	DISC	DISC	24.8
VR3A_76	82.6	1.964	1.81	0.038	0.1777	0.0021	0.212	1047	14	1054	12	1046	40	1046	40	0.8
VR3A_77	112.5	1.79	0.2887	0.0087	0.04002	0.00064	0.085	257.9	7	252.9	4	260	74	252.9	4	1.9
VR3A_78	770	3.89	0.38	0.02	0.04722	0.00058	0.197	326	15	297.4	3.6	530	110	297.4	3.6	8.8
VR3A_79	168.7	0.657	0.28	0.0058	0.03897	0.00066	0.142	251.1	4.5	246.4	4.1	285	58	246.4	4.1	1.9
VR3A_80	30.1	1.736	0.195	0.016	0.02702	0.00085	0.191	177	13	171.8	5.4	220	160	171.8	5.4	2.9
VR3A_81	53.6	0.876	0.36	0.029	0.046	0.0015	0.229	311	22	289.6	9.5	450	170	289.6	9.5	6.9

VR3A_81	64.8	0.67	0.383	0.053	0.0371	0.0025	0.692	301	16	235	16	800	180	DISC	DISC	21.9
VR3A_82	313	47.8	0.423	0.007	0.05679	0.0007	0.362	358	5	356	4.3	384	37	356	4.3	0.6
VR3A_83	177	1.567	0.276	0.018	0.02804	0.00043	0.145	246	14	178.3	2.7	890	140	DISC	DISC	27.5
VR3A_84	119.1	0.927	0.264	0.013	0.03457	0.00094	0.086	237	11	219	5.9	440	130	219	5.9	7.6
VR3A_86	567	2.82	0.3239	0.005	0.04467	0.00043	0.409	284.8	3.8	281.7	2.7	318	34	281.7	2.7	1.1
VR3A_88	704	3.01	0.3354	0.0076	0.04493	0.00068	0.242	294.8	5.4	283.3	4.2	379	46	283.3	4.2	3.9
VR3A_89	310	1.194	0.2094	0.0051	0.02887	0.00044	0.248	192.9	4.3	183.9	2.9	294	59	183.9	2.9	4.7
VR3A_91	223	1.72	0.3139	0.0095	0.039	0.0011	0.199	276.9	7.3	246.4	6.8	509	87	246.4	6.8	11.0
VR3A_91	141	2.84	0.367	0.016	0.0481	0.0015	0.020	317	12	302.8	9.1	420	120	302.8	9.1	4.5
VR3A_93	65.9	1.201	0.171	0.012	0.02513	0.00089	0.347	160	10	160	5.6	240	150	160	5.6	0.0
VR3A_94	143	1.15	0.2053	0.007	0.02868	0.00056	0.100	189.3	5.9	182.2	3.5	254	82	182.2	3.5	3.8
VR3A_95	320	1.438	0.2055	0.0052	0.02909	0.00058	0.385	190.3	4.3	184.8	3.7	232	60	184.8	3.7	2.9
VR3A_96	584	0.478	0.2688	0.0043	0.03843	0.00037	0.250	241.7	3.4	243.1	2.3	206	38	243.1	2.3	0.6
VR3A_99	452	4.42	0.318	0.0053	0.04406	0.00056	0.091	280.2	4.1	277.9	3.5	297	40	277.9	3.5	0.8
VR3A_100	199	1.18	0.231	0.019	0.02598	0.00075	0.114	210	15	165.3	4.7	700	170	DISC	DISC	21.3
VR3A_100	120.6	2.11	0.26	0.013	0.0349	0.0016	0.398	234	10	221	10	356	98	221	10	5.6
VR3A_101	201.4	0.9	0.2368	0.0056	0.03397	0.00047	0.067	215.6	4.6	215.3	3	193	57	215.3	3	0.1
VR3A_102	148.2	0.892	0.447	0.011	0.05845	0.00066	0.118	374.9	7.7	366.2	4	405	67	366.2	4	2.3
VR3A_109	481	1.565	0.1929	0.0034	0.0278	0.0004	0.233	179	2.9	176.8	2.5	186	44	176.8	2.5	1.2
VR3A_110	145.1	1.249	0.1752	0.0063	0.02631	0.00061	0.090	163.7	5.5	167.4	3.8	129	93	167.4	3.8	2.3
VR3A_111	1320	5.05	0.3214	0.0073	0.03688	0.0008	0.518	282.8	5.6	234.4	5.2	722	51	234.4	5.2	17.1
VR3A_111	433	2.6	0.346	0.01	0.04371	0.00086	0.150	301.3	7.6	275.8	5.3	483	75	275.8	5.3	8.5
VR3A_112	48	1.241	0.217	0.012	0.0289	0.0011	0.004	198.6	9.9	183.3	6.9	350	130	183.3	6.9	7.7
VR3A_113	245	2.91	0.2849	0.0068	0.03981	0.00056	0.185	254.2	5.4	251.6	3.5	269	57	251.6	3.5	1.0
VR3A_114	88.2	0.615	0.278	0.012	0.03716	0.00096	0.057	250.5	9	235.2	6	352	96	235.2	6	6.1
VR3A_115	108.3	0.789	5.036	0.08	0.3143	0.0038	0.466	1824	14	1761	19	1867	24	1867	24	5.7
VR3A_116	94.8	0.982	0.201	0.012	0.0278	0.0013	0.135	184.9	9.9	176.6	8.3	360	120	176.6	8.3	4.5
VR3A_117	362	1.7	0.1929	0.0044	0.02769	0.00045	0.280	178.9	3.7	176	2.8	211	49	176	2.8	1.6
VR3A_118	516	2.461	0.1992	0.0036	0.02858	0.00037	0.483	184.4	3.1	181.6	2.3	207	39	181.6	2.3	1.5
VR3A_119	153.7	0.73	0.291	0.011	0.03641	0.00074	0.009	260.4	9.1	230.5	4.6	547	99	230.5	4.6	11.5

VR3A_122	330.7	0.91	0.2817	0.0044	0.03393	0.00073	0.121	251.9	3.5	215.1	4.5	631	61	215.1	4.5	14.6
VR3A_124	159	2.39	0.2931	0.0083	0.0395	0.0012	0.447	260.7	6.5	249.8	7.4	424	70	249.8	7.4	4.2
VR3A_126	116.3	0.275	0.2623	0.0092	0.0372	0.00085	0.128	237.1	7.2	235.4	5.3	234	83	235.4	5.3	0.7
VR3A_127	312.1	2.691	0.2043	0.0085	0.02821	0.00063	0.338	188.5	7.2	179.3	4	305	82	179.3	4	4.9
VR3A_128	195.2	1.558	0.192	0.0051	0.027	0.00049	0.072	178.1	4.3	171.7	3	261	63	171.7	3	3.6
VR3A_129	176.4	0.261	0.885	0.094	0.045	0.0012	0.680	641	53	283.7	7.5	2240	170	DISC	DISC	55.7
VR3A_130	400	3.13	0.3305	0.0084	0.0433	0.0011	0.357	289.6	6.4	273.4	6.6	447	60	273.4	6.6	5.6
VR3A_131	59.8	1.359	0.2239	0.0091	0.03235	0.00095	0.047	204.7	7.5	205.2	6	222	94	205.2	6	0.2
VR1819_1	821	1.304	0.3364	0.0098	0.0395	0.00052	0.275	293.9	7.4	249.7	3.2	666	62	249.7	3.2	15.0
VR1819_3	258.1	0.955	0.338	0.02	0.04067	0.00052	0.218	294	15	257	3.3	590	120	257	3.3	12.6
VR1819_6	282	1.6	0.357	0.013	0.04378	0.00049	0.293	309.4	9.8	276.2	3	571	74	276.2	3	10.7
VR1819_7	135.9	1.883	0.1808	0.0086	0.02691	0.00063	0.312	168.5	7.4	171.2	3.9	133	87	171.2	3.9	1.6
VR1819_8	298	1.294	0.3186	0.0087	0.04161	0.00076	0.351	280.5	6.7	262.8	4.7	431	62	262.8	4.7	6.3
VR1819_10	90.6	0.737	0.2588	0.0088	0.03683	0.0009	0.355	233.3	7.1	233.1	5.6	244	77	233.1	5.6	0.1
VR1819_11	271	1.89	0.3083	0.0079	0.04234	0.00065	0.462	273.2	6	267.3	4	343	48	267.3	4	2.2
VR1819_12	388	4.19	0.2975	0.005	0.0423	0.00045	0.036	264.3	3.9	267.1	2.8	231	45	267.1	2.8	1.1
VR1819_13	247	1.429	0.1967	0.008	0.02792	0.00051	0.200	182.1	6.8	177.5	3.2	220	89	177.5	3.2	2.5
VR1819_16	75.9	1.353	0.194	0.014	0.02727	0.0009	0.114	179	12	173.4	5.6	320	170	173.4	5.6	3.1
VR1819_17	32.9	0.6	0.54	0.12	0.0337	0.0013	0.536	382	64	213.6	7.9	1200	340	DISC	DISC	44.1
VR1819_18	27.8	0.878	0.321	0.022	0.0366	0.0012	0.041	281	17	231.6	7.6	660	160	231.6	7.6	17.6
VR1819_19	504	5.69	0.535	0.052	0.0448	0.001	0.571	430	34	282.3	6.2	1260	170	DISC	DISC	34.3
VR1819_19	156.6	2.05	0.48	0.017	0.0613	0.0015	0.204	398	11	383.6	9.3	497	87	383.6	9.3	3.6
VR1819_20	217.4	1.666	0.1921	0.0061	0.02759	0.00069	0.307	179	5.1	175.4	4.3	237	73	175.4	4.3	2.0
VR1819_21	276	2.74	0.34	0.018	0.0429	0.0015	0.496	297	13	271	9.2	477	91	271	9.2	8.8
VR1819_24	388.3	1.83	0.313	0.0057	0.04304	0.00044	0.230	276.4	4.4	271.6	2.7	334	45	271.6	2.7	1.7
VR1819_25	341	8.7	0.3086	0.0068	0.0423	0.00069	0.086	272.9	5.3	267	4.3	309	53	267	4.3	2.2
VR1819_27	371	3.4	0.326	0.011	0.0431	0.00074	0.273	285.9	8.1	272	4.5	372	70	272	4.5	4.9
VR1819_29	150.5	1.141	0.2877	0.0084	0.0418	0.00092	0.082	256.5	6.6	264	5.7	259	77	264	5.7	2.9

VR1819_31	225.6	1.545	0.1968	0.0048	0.02863	0.00039	0.287	182.8	4	182	2.4	181	49	182	2.4	0.4
VR1819_32	265	2.15	0.3352	0.0074	0.04582	0.0008	0.309	293.2	5.6	288.8	4.9	328	53	288.8	4.9	1.5
VR1819_33	706	2.05	0.3262	0.0054	0.0434	0.00059	0.067	286.5	4.1	273.8	3.6	378	45	273.8	3.6	4.4
VR1819_34	368	1.254	0.2139	0.0059	0.02753	0.00052	0.035	196.6	4.9	175.1	3.3	445	71	175.1	3.3	10.9
VR1819_35	31.6	1.56	0.192	0.013	0.0271	0.0012	0.214	179	11	172.6	7.3	290	140	172.6	7.3	3.6
VR1819_36	75.2	1.106	0.203	0.015	0.0267	0.00097	0.019	187	12	169.8	6.1	410	170	169.8	6.1	9.2
VR1819_37	312.3	1.389	0.3088	0.0068	0.04108	0.00098	0.398	273.1	5.3	259.5	6.1	394	52	259.5	6.1	5.0
VR1819_38	117.2	1.064	0.302	0.011	0.04138	0.00095	0.218	267.6	8.4	261.4	5.9	328	96	261.4	5.9	2.3
VR1819_39	283	0.915	0.1962	0.0049	0.02868	0.00033	0.157	181.7	4.2	182.3	2.1	175	54	182.3	2.1	0.3
VR1819_40	94	0.706	0.282	0.013	0.03857	0.00091	0.093	252	10	243.9	5.7	310	100	243.9	5.7	3.2
VR1819_44	339.5	2.023	0.3235	0.0064	0.04468	0.00057	0.164	284.4	5	281.7	3.5	297	53	281.7	3.5	0.9
VR1819_47	222	1.116	0.2968	0.0086	0.04057	0.00089	0.369	263.7	6.8	256.3	5.5	305	75	256.3	5.5	2.8
VR1819_51	251	1.467	0.1971	0.0056	0.02808	0.00051	0.186	183.1	4.7	178.5	3.2	201	66	178.5	3.2	2.5
VR1819_52	390	1.466	0.2054	0.005	0.02938	0.00043	0.098	189.5	4.2	186.6	2.7	219	54	186.6	2.7	1.5
VR1819_54	153.7	1.339	0.398	0.016	0.02972	0.00072	0.179	339	12	188.8	4.5	1590	85	DISC	DISC	44.3
VR1819_55	117.3	1.68	0.2005	0.0071	0.02916	0.0007	0.301	186.1	6.1	185.2	4.4	209	76	185.2	4.4	0.5
VR1819_58	97.2	0.89	0.213	0.011	0.02678	0.00066	0.208	195.6	9.6	170.4	4.1	460	120	170.4	4.1	12.9
VR1819_59	333	2.461	0.1873	0.0041	0.0276	0.00032	0.303	174.3	3.5	175.5	2	136	44	175.5	2	0.7
VR1819_60	217	1.082	0.3112	0.0072	0.04297	0.00058	0.204	274.9	5.6	271.2	3.6	292	53	271.2	3.6	1.3
VR1819_61	154	0.824	0.2688	0.0093	0.03624	0.00063	0.026	242.5	7.2	229.5	3.9	330	77	229.5	3.9	5.4
VR1819_62	75.4	0.855	0.289	0.012	0.0397	0.001	0.168	257.2	9.4	250.7	6.3	303	96	250.7	6.3	2.5
VR1819_64	45	0.99	0.261	0.017	0.0363	0.00084	0.030	236	14	229.9	5.2	300	140	229.9	5.2	2.6
VR1819_65	241	1.048	0.2811	0.0074	0.04003	0.00065	0.078	251.3	5.8	253	4	231	63	253	4	0.7
VR1819_66	189	1.315	0.1991	0.0058	0.029	0.0005	0.189	184.2	4.9	184.3	3.1	171	65	184.3	3.1	0.1
VR1819_69	167	1.24	0.364	0.011	0.04709	0.00071	0.173	314.2	8.4	296.6	4.4	438	69	296.6	4.4	5.6
VR1819_71	60	0.3825	0.234	0.018	0.0237	0.0012	0.189	212	15	150.8	7.8	1010	180	DISC	DISC	28.9
VR1819_72	135.9	1.102	0.36	0.011	0.04713	0.0008	0.316	311.9	7.9	296.8	4.9	420	70	296.8	4.9	4.8
VR1819_73	518	1.672	0.1975	0.0047	0.02848	0.00039	0.048	182.8	4	181	2.5	191	63	181	2.5	1.0
VR1819_76	342	1.682	0.1903	0.0069	0.02728	0.0004	0.177	176.6	5.8	173.5	2.5	198	74	173.5	2.5	1.8
VR1819_77	275.1	0.432	0.2747	0.0066	0.0381	0.00056	0.056	246.3	5.3	241.1	3.5	290	62	241.1	3.5	2.1

VR1819_78	243	1.614	0.2123	0.0077	0.02917	0.00055	0.024	195.1	6.4	185.3	3.4	291	74	185.3	3.4	5.0
VR1819_79	205	1.47	0.341	0.014	0.0448	0.00083	0.150	297	11	282.5	5.2	408	98	282.5	5.2	4.9
VR1819_80	196.3	2.74	0.2028	0.0077	0.02916	0.00051	0.089	187.3	6.5	185.3	3.2	241	97	185.3	3.2	1.1
VR1819_81	158.2	1.177	0.35	0.012	0.04713	0.00094	0.101	304.2	8.8	296.9	5.8	309	74	296.9	5.8	2.4
VR1819_85	346.7	63	0.421	0.012	0.0563	0.0017	0.396	356.5	8.7	353	10	385	75	353	10	1.0
VR1819_86	105.2	0.949	0.191	0.015	0.0271	0.0012	0.292	177	13	172.4	7.3	210	160	172.4	7.3	2.6
VR1819_88	203	1.765	0.2073	0.0069	0.03028	0.00044	0.021	191	5.8	192.3	2.8	181	76	192.3	2.8	0.7
VR1819_89	286	0.763	0.2833	0.0061	0.03957	0.00065	0.208	253.7	4.8	250.1	4	296	50	250.1	4	1.4
VR1819_90	139.9	1.829	0.1883	0.0083	0.02701	0.0006	0.017	174.8	7.1	171.8	3.8	210	100	171.8	3.8	1.7
VR1819_91	339	3.9	0.3188	0.0088	0.04381	0.00053	0.008	280.5	6.6	276.4	3.3	293	57	276.4	3.3	1.5
VR1819_93	197.3	2.128	0.3174	0.0072	0.04321	0.00073	0.257	279.6	5.5	272.7	4.5	359	57	272.7	4.5	2.5
VR1819_95	141.2	1.102	0.1941	0.009	0.02756	0.00095	0.017	179.9	7.6	175.2	6	240	120	175.2	6	2.6
VR1819_101	571	1.455	0.2009	0.0057	0.02898	0.00058	0.587	186.6	5	184.1	3.6	235	53	184.1	3.6	1.3
VR1819_102	242.1	13.2	0.3337	0.0074	0.04616	0.0006	0.068	293.1	5.8	290.9	3.7	297	59	290.9	3.7	0.8
VR1819_103	542	1.488	0.304	0.0056	0.04205	0.00049	0.405	269.3	4.4	265.5	3	294	41	265.5	3	1.4
VR1819_104	510	1.16	0.2105	0.0047	0.02962	0.00033	0.376	193.8	3.9	188.2	2	243	45	188.2	2	2.9
VR1819_105	13.76	4.64	4.96	0.19	0.0842	0.003	0.156	1809	33	520	18	4036	68	DISC	DISC	71.3
VR1819_106	116.6	0.983	0.1834	0.0085	0.02681	0.00063	0.234	170.5	7.2	170.5	4	169	95	170.5	4	0.0
VR1819_107	502	1.804	0.3018	0.0056	0.04194	0.0006	0.265	267.7	4.4	264.8	3.7	297	45	264.8	3.7	1.1
VR1819_108	113.4	1.006	0.178	0.0059	0.0262	0.00065	0.159	166.2	5.1	166.7	4.1	184	77	166.7	4.1	0.3
VR1819_111	125.4	1.369	0.2023	0.008	0.02655	0.00089	0.082	186.7	6.7	168.9	5.6	450	110	168.9	5.6	9.5
VR1819_113	191.4	1.075	0.209	0.0069	0.02782	0.00056	0.205	192.4	5.8	176.9	3.5	338	70	176.9	3.5	8.1
VR1819_114	159	0.956	0.255	0.01	0.03639	0.00073	0.189	230.1	8.2	230.4	4.5	214	80	230.4	4.5	0.1
VR1819_115	101.4	1.9	0.305	0.011	0.04157	0.00092	0.290	269.8	8.3	262.5	5.7	303	75	262.5	5.7	2.7
VR1819_116	819	1.938	0.2112	0.0036	0.02993	0.00035	0.316	194.4	3	190.1	2.2	255	39	190.1	2.2	2.2
VR1819_117	152.8	0.961	0.351	0.016	0.04301	0.00078	0.489	304	12	271.4	4.8	508	79	271.4	4.8	10.7
VR1819_126	744	6.44	0.2114	0.0039	0.03045	0.00035	0.152	194.6	3.3	193.4	2.2	205	41	193.4	2.2	0.6
VR1819_127	109	2.265	0.268	0.018	0.03118	0.00071	0.009	239	14	197.9	4.4	600	140	197.9	4.4	17.2
VR1819_128	80.1	0.973	0.1784	0.0081	0.02644	0.00069	0.132	166.4	7	168.2	4.3	160	110	168.2	4.3	1.1
VR1819_129	268.2	0.984	0.3133	0.0091	0.04339	0.00064	0.031	276.4	7	273.8	3.9	307	77	273.8	3.9	0.9

VR1819_130	385	2.37	0.3238	0.0066	0.04521	0.00064	0.108	285.9	5	285	4	280	51	285	4	0.3
VR1819_131	146.5	1.011	0.272	0.014	0.02858	0.00051	0.142	243	11	181.7	3.2	853	99	DISC	DISC	25.2
VR30_1	207.9	2.03	0.3169	0.008	0.04481	0.00054	0.008	279.9	6.3	282.6	3.3	229	62	282.6	3.3	1.0
VR30_2	356	0.831	0.2863	0.0049	0.03926	0.00046	0.197	255.5	3.9	248.2	2.8	322	47	248.2	2.8	2.9
VR30_3	261	0.617	0.2045	0.005	0.02931	0.00038	0.058	188.8	4.3	186.2	2.4	232	59	186.2	2.4	1.4
VR30_4	1632	91	0.348	0.015	0.04434	0.00072	0.461	303	11	279.7	4.4	461	55	279.7	4.4	7.7
VR30_4	219.2	2.79	0.353	0.01	0.04784	0.00063	0.305	307.7	7.8	301.2	3.8	278	60	301.2	3.8	2.1
VR30_5	362	1.306	0.349	0.013	0.04184	0.00056	0.528	302.9	9.7	264.2	3.5	597	70	264.2	3.5	12.8
VR30_6	417	1.67	0.3236	0.0061	0.0445	0.00054	0.068	284.6	4.7	280.6	3.3	329	51	280.6	3.3	1.4
VR30_7	157.7	0.942	0.2119	0.0075	0.02725	0.00042	0.069	194.7	6.3	173.3	2.7	410	80	173.3	2.7	11.0
VR30_8	315.6	1.633	0.2645	0.006	0.02872	0.00041	0.056	238.6	4.7	182.5	2.6	831	53	DISC	DISC	23.5
VR30_9	125.9	1.089	0.2467	0.0097	0.03437	0.00071	0.101	223.4	7.9	217.8	4.4	325	85	217.8	4.4	2.5
VR30_10	331	1.198	0.42	0.013	0.04066	0.00055	0.072	355.6	9.2	256.9	3.4	1051	74	DISC	DISC	27.8
VR30_12	116.4	1.723	0.3007	0.0075	0.04109	0.00074	0.234	266.7	5.9	259.6	4.6	304	64	259.6	4.6	2.7
VR30_13	48.2	1.598	0.188	0.011	0.02728	0.00082	0.129	173.9	9.3	173.4	5.1	250	130	173.4	5.1	0.3
VR30_14	270	2.587	0.2984	0.0073	0.04087	0.00064	0.024	265	5.7	258.2	4	303	63	258.2	4	2.6
VR30_15	372	2.205	0.2843	0.0056	0.03967	0.00045	0.310	254.5	4.3	250.8	2.8	287	48	250.8	2.8	1.5
VR30_16	216	7.67	0.482	0.025	0.052	0.0012	0.095	399	17	326.8	7.4	830	100	326.8	7.4	18.1
VR30_16	16.6	1.358	0.857	0.073	0.0831	0.0037	0.065	622	39	514	22	1030	210	514	22	17.4
VR30_17	430	1.678	0.3259	0.007	0.04384	0.00053	0.206	286.2	5.3	276.6	3.3	330	44	276.6	3.3	3.4
VR30_18	166	0.689	0.306	0.019	0.03793	0.00047	0.344	269	14	240	2.9	480	110	240	2.9	10.8
VR30_19	110.5	3.04	0.3016	0.0088	0.03985	0.00081	0.243	267.2	6.8	251.8	5	358	68	251.8	5	5.8
VR30_20	478	1.739	0.2012	0.004	0.02837	0.00038	0.201	186	3.4	180.3	2.4	244	50	180.3	2.4	3.1
VR30_21	352	1.34	0.496	0.026	0.0479	0.0013	0.211	411	18	301.5	8.1	990	100	DISC	DISC	26.6
VR30_22	81.7	3.73	0.309	0.011	0.04274	0.00086	0.143	274	8	269.8	5.3	302	77	269.8	5.3	1.5
VR30_23	55	1.044	0.339	0.023	0.041	0.0013	0.176	296	17	258.8	8	610	130	258.8	8	12.6
VR30_24	133	1.84	0.306	0.009	0.04214	0.00082	0.325	270.6	7	266.1	5.1	301	69	266.1	5.1	1.7
VR30_25	216	1.918	0.204	0.0049	0.02853	0.00053	0.131	188.4	4.1	181.3	3.3	257	64	181.3	3.3	3.8

VR30_26	196.3	1.043	0.317	0.0093	0.04204	0.00079	0.240	279.2	7.1	265.4	4.9	369	66	265.4	4.9	4.9
VR30_27	371	0.963	0.508	0.012	0.04285	0.00061	0.161	418.2	8.5	270.5	3.8	1322	53	DISC	DISC	35.3
VR30_28	399	5.2	0.3205	0.0067	0.04243	0.0005	0.116	282	5.1	267.9	3.1	374	44	267.9	3.1	5.0
VR30_29	244	1.51	0.2888	0.0074	0.03818	0.00051	0.110	257.3	5.8	241.5	3.2	365	67	241.5	3.2	6.1
VR30_30	178.5	1.391	0.2005	0.0064	0.02874	0.0005	0.214	185.3	5.4	182.6	3.1	187	66	182.6	3.1	1.5
VR30_31	87.9	1.108	0.228	0.011	0.03164	0.00077	0.038	208.2	8.7	201.3	4.7	270	100	201.3	4.7	3.3
VR30_32	303.3	2.29	0.3112	0.0053	0.04231	0.00041	0.060	275	4.1	267.1	2.5	347	46	267.1	2.5	2.9
VR30_33	44.7	0.759	0.278	0.013	0.0376	0.0012	0.004	248	11	238.1	7.3	330	120	238.1	7.3	4.0
VR30_34	72	1.455	0.318	0.013	0.03956	0.00085	0.176	280.7	9.4	250.1	5.3	485	86	250.1	5.3	10.9
VR30_35	1282	34.7	0.4696	0.0074	0.06198	0.00087	0.422	390.8	5.1	387.7	5.3	420	29	387.7	5.3	0.8
VR30_36	454	1.48	0.2027	0.0034	0.02917	0.0003	0.195	187.3	2.9	185.4	1.9	211	42	185.4	1.9	1.0
VR30_37	461	1.521	0.3711	0.0066	0.05049	0.00073	0.398	320.9	4.8	317.5	4.5	336	41	317.5	4.5	1.1
VR30_38	151	2.52	0.312	0.01	0.03982	0.00084	0.166	276.6	8.2	251.7	5.2	483	99	251.7	5.2	9.0
VR30_39	165.8	0.583	0.3018	0.0084	0.03828	0.00043	0.002	267.5	6.5	242.2	2.7	491	69	242.2	2.7	9.5
VR30_40	582	1.139	0.1942	0.0031	0.02809	0.00031	0.056	180.1	2.6	178.6	1.9	209	42	178.6	1.9	0.8
VR30_41	291.4	0.9	2.369	0.041	0.2097	0.002	0.512	1233	12	1227	11	1231	26	1231	26	0.3
VR30_42	310	0.882	0.2813	0.0066	0.03944	0.00057	0.070	251.5	5.2	249.4	3.5	263	56	249.4	3.5	0.8
VR30_43	195.2	1.542	0.24	0.012	0.02801	0.00067	0.159	218	10	178.1	4.2	630	130	178.1	4.2	18.3
VR30_44	85	1.23	0.295	0.011	0.0413	0.0011	0.400	262.9	8.7	260.7	7	329	82	260.7	7	0.8
VR30_45	293	1.837	0.2228	0.0096	0.0291	0.00041	0.189	203.7	7.6	184.9	2.6	358	63	184.9	2.6	9.2
VR30_46	369	11.3	0.3169	0.0057	0.04323	0.0005	0.326	279.3	4.3	272.8	3.1	330	40	272.8	3.1	2.3
VR30_47	131	1.196	0.458	0.027	0.04516	0.00069	0.408	380	18	284.7	4.3	950	100	DISC	DISC	25.1
VR30_49	217	1.792	0.377	0.012	0.04176	0.00054	0.093	324.5	8.7	263.7	3.4	773	66	263.7	3.4	18.7
VR30_50	175	1.217	0.1791	0.0057	0.02617	0.00046	0.121	167	4.9	166.5	2.9	190	75	166.5	2.9	0.3
VR30_51	33.5	0.939	0.236	0.014	0.0281	0.001	0.194	215	11	178.9	6.5	610	130	178.9	6.5	16.8
VR30_52	161.6	2.15	0.3111	0.0088	0.04336	0.00069	0.367	274.6	6.8	273.6	4.2	278	59	273.6	4.2	0.4
VR30_53	215	1.057	0.359	0.011	0.04016	0.00066	0.107	311	8.3	253.8	4.1	751	71	253.8	4.1	18.4
VR30_54	286	2.84	0.1942	0.0046	0.02844	0.00038	0.164	180.1	3.9	180.7	2.4	164	53	180.7	2.4	0.3
VR30_55	446	1.869	0.396	0.023	0.04229	0.00061	0.189	337	16	267	3.8	780	120	DISC	DISC	20.8
VR30_56	96.3	0.4082	0.306	0.021	0.03613	0.00064	0.263	265	14	228.8	4	520	110	228.8	4	13.7

VR30_57	365	2.59	0.198	0.0052	0.02859	0.00051	0.430	183.3	4.4	181.7	3.2	198	54	181.7	3.2	0.9
VR30_58	249	1.13	0.481	0.024	0.04476	0.00066	0.143	394	16	282.2	4.1	1083	94	DISC	DISC	28.4
VR30_59	372	2.35	0.409	0.042	0.04459	0.00092	0.082	345	29	281.2	5.7	730	190	281.2	5.7	18.5
VR30_60	845	2.64	0.3218	0.0056	0.04468	0.00054	0.031	284	4.5	281.7	3.3	296	50	281.7	3.3	0.8
VR30_61	184	1.896	0.1954	0.0067	0.0285	0.00051	0.029	180.9	5.7	181.1	3.2	201	81	181.1	3.2	0.1
VR30_62	422	8.9	0.3319	0.0055	0.04551	0.00056	0.217	290.9	4.2	286.9	3.5	331	38	286.9	3.5	1.4
VR30_64	740	4.86	0.3442	0.0058	0.04451	0.00035	0.151	300.2	4.4	280.7	2.2	464	41	280.7	2.2	6.5
VR30_65	80.2	0.922	1.792	0.027	0.1717	0.0028	0.338	1043.5	9.5	1021	15	1102	38	1102	38	7.4
VR30_66	121.2	3.249	0.291	0.028	0.02847	0.00068	0.323	255	20	181	4.3	890	140	DISC	DISC	29.0
VR30_67	427	49.8	0.475	0.023	0.0601	0.0014	0.445	394	16	376.3	8.5	510	88	376.3	8.5	4.5
VR30_68	214	1.92	0.3457	0.0068	0.04757	0.00063	0.312	302.6	5.1	299.6	3.9	300	46	299.6	3.9	1.0
VR30_69	740	4.59	0.3383	0.0083	0.04607	0.00065	0.487	295.5	6.2	290.3	4	325	41	290.3	4	1.8
VR30_70	199	2.51	0.3147	0.0069	0.04186	0.00064	0.149	278.2	5.4	264.3	4	383	56	264.3	4	5.0
VR30_71	148	1.552	0.891	0.049	0.03443	0.00073	0.426	640	27	218.2	4.6	2720	87	DISC	DISC	65.9
VR30_72	1450	20.4	0.355	0.017	0.04514	0.00041	0.229	307	12	284.6	2.5	437	72	284.6	2.5	7.3
VR30_73	103.6	0.739	0.2356	0.0081	0.02821	0.00057	0.089	214.4	6.6	179.3	3.6	588	81	179.3	3.6	16.4
VR30_74	529	1.584	0.337	0.0067	0.04504	0.00064	0.086	294.7	5.1	284	3.9	384	57	284	3.9	3.6
VR30_75	630	1.096	0.3379	0.0075	0.04128	0.00051	0.504	295.3	5.6	260.7	3.1	560	52	260.7	3.1	11.7
VR30_76	331	2.3	0.24	0.013	0.03005	0.00042	0.539	214.9	9.8	190.8	2.6	454	89	190.8	2.6	11.2
VR30_77	387	0.699	0.2798	0.0051	0.03943	0.00042	0.073	250.4	4.1	249.3	2.6	256	47	249.3	2.6	0.4
VR30_78	130.7	1.322	0.32	0.01	0.04343	0.00062	0.028	281.9	7.8	274.1	3.8	330	76	274.1	3.8	2.8
VR30_79	83.9	1.023	0.812	0.075	0.0455	0.0014	0.285	597	40	286.8	8.5	2040	140	DISC	DISC	52.0
VR30_80	247	1.253	0.241	0.023	0.02737	0.00045	0.121	216	17	174.1	2.9	580	130	174.1	2.9	19.4
VR30_81	120.7	2.397	0.3331	0.0094	0.04579	0.00068	0.139	291.4	7.2	288.6	4.2	314	63	288.6	4.2	1.0
VR30_82	570	1.05	0.4035	0.008	0.04142	0.00066	0.174	344	5.8	261.6	4.1	957	50	DISC	DISC	24.0
VR30_83	66.2	5.77	0.27	0.012	0.03968	0.00086	0.045	242.1	9.3	250.8	5.4	180	100	250.8	5.4	3.6
VR30_84	621	9.65	0.361	0.013	0.04652	0.00095	0.688	312.3	9.5	293.1	5.8	514	59	293.1	5.8	6.1
VR30_85	798	0.675	0.65	0.034	0.03305	0.00073	0.206	509	21	209.6	4.6	2240	100	DISC	DISC	58.8
VR30_86	270	1.965	0.2118	0.0046	0.02939	0.00046	0.166	194.9	3.8	186.7	2.9	285	56	186.7	2.9	4.2
VR30_87	374	25.7	0.306	0.0072	0.04323	0.00063	0.252	271.9	5.4	272.8	3.9	259	53	272.8	3.9	0.3

VR30_88	27.9	0.777	0.282	0.019	0.0372	0.0015	0.135	250	15	235.3	9.3	340	140	235.3	9.3	5.9
VR30_89	171	0.516	0.3069	0.0095	0.03749	0.00068	0.449	271.3	7.3	237.2	4.2	543	81	237.2	4.2	12.6
VR30_90	664	24.4	0.356	0.014	0.04539	0.00041	0.140	309	10	286.1	2.6	465	77	286.1	2.6	7.4
VR30_91	256	4.07	0.3247	0.0087	0.04196	0.00059	0.125	285.1	6.6	264.9	3.6	475	66	264.9	3.6	7.1
VR30_92	157	1.75	0.335	0.011	0.04443	0.00074	0.276	292.4	7.9	280.2	4.5	377	62	280.2	4.5	4.2
VR30_93	774	1.5	0.2154	0.0044	0.02911	0.00034	0.355	197.9	3.7	185	2.1	361	46	185	2.1	6.5
VR30_94	266	1.612	0.2251	0.0069	0.0294	0.0005	0.136	205.9	5.7	186.8	3.1	420	78	186.8	3.1	9.3
VR30_95	349	4.84	0.311	0.0055	0.04315	0.00058	0.462	275.3	4.3	272.3	3.6	276	39	272.3	3.6	1.1
VR30_96	608	11.1	0.305	0.0044	0.04209	0.00042	0.013	270.2	3.4	265.8	2.6	292	39	265.8	2.6	1.6
VR30_97	272	2.081	0.2035	0.0051	0.03011	0.00046	0.239	187.9	4.3	191.2	2.9	149	57	191.2	2.9	1.8
VR30_98	126.2	1.184	0.2953	0.0097	0.03852	0.00063	0.084	262.2	7.6	243.6	3.9	409	83	243.6	3.9	7.1
VR30_99	18.6	1.079	0.256	0.027	0.0248	0.0015	0.096	228	22	158.1	9.2	1070	230	DISC	DISC	30.7
VR30_100	492	5.221	0.3221	0.009	0.04267	0.00063	0.159	283.3	6.9	269.4	3.9	381	52	269.4	3.9	4.9
VR30_100	492	5.061	0.37	0.01	0.04909	0.00068	0.556	319.1	7.6	308.9	4.2	393	51	308.9	4.2	3.2
VR30_101	310	3.58	0.33	0.011	0.04192	0.00056	0.407	287.7	7.8	264.7	3.4	472	56	264.7	3.4	8.0
VR30_102	340	4.72	0.3101	0.0066	0.04398	0.00056	0.213	274	5.1	277.5	3.4	259	48	277.5	3.4	1.3
VR30_103	591	1.964	0.1951	0.0038	0.02811	0.00034	0.325	180.8	3.2	178.7	2.1	217	39	178.7	2.1	1.2
VR30_104	168.2	0.976	0.2858	0.0065	0.04001	0.00059	0.199	255	5.2	252.9	3.7	250	54	252.9	3.7	0.8
VR30_105	288	10.2	0.3106	0.0066	0.04357	0.00063	0.323	275.1	5.2	274.9	3.9	281	47	274.9	3.9	0.1
VR30_106	360	3.14	0.204	0.0066	0.02955	0.00058	0.396	188.3	5.5	187.7	3.6	207	71	187.7	3.6	0.3
VR30_106	87.3	1.64	0.31	0.028	0.042	0.0015	0.116	273	22	265.3	9.2	330	210	265.3	9.2	2.8
VR30_107	86.2	1.554	0.2067	0.0083	0.02671	0.00069	0.282	190.3	7	169.9	4.3	423	88	169.9	4.3	10.7
VR30_108	830	14.9	0.5178	0.0053	0.06611	0.00052	0.367	423.6	3.5	412.7	3.2	479	26	412.7	3.2	2.6
VR30_109	125.6	1.349	0.341	0.018	0.03673	0.0006	0.207	297	13	232.5	3.7	820	110	DISC	DISC	21.7
VR30_110	281	1.03	0.2767	0.0064	0.03675	0.00054	0.246	247.8	5.1	232.6	3.3	395	55	232.6	3.3	6.1
VR30_111	200.8	1.601	0.3269	0.0074	0.04396	0.00069	0.089	286.9	5.6	277.3	4.3	389	57	277.3	4.3	3.3
VR30_112	518	1.416	0.2117	0.0048	0.02909	0.00029	0.113	194.8	4	184.9	1.8	303	55	184.9	1.8	5.1
VR30_113	234	1.187	0.3433	0.008	0.0464	0.00067	0.339	299.3	6	292.4	4.2	337	52	292.4	4.2	2.3
VR30_114	433	2.482	0.1928	0.0039	0.02783	0.00038	0.280	179.3	3.2	177	2.4	220	47	177	2.4	1.3
VR30_115	349	3.057	0.2873	0.0046	0.0383	0.0005	0.255	256.3	3.6	242.3	3.1	340	38	242.3	3.1	5.5

VR30_116	350	1.35	0.315	0.006	0.04257	0.00045	0.145	277.8	4.7	268.7	2.8	336	47	268.7	2.8	3.3
VR30_118	486	1.047	0.424	0.031	0.04141	0.00063	0.617	355	21	261.6	3.9	920	150	DISC	DISC	26.3
VR30_119	489	3.89	0.389	0.013	0.04636	0.00058	0.095	332.7	9.5	292.1	3.6	590	77	292.1	3.6	12.2
VR30_120	304	0.856	0.1994	0.0038	0.02785	0.00036	0.213	184.9	3.3	177.1	2.2	272	49	177.1	2.2	4.2
VR30_121	363	1.328	0.359	0.0055	0.04918	0.00049	0.092	311.3	4.1	309.5	3	320	38	309.5	3	0.6
VR30_122	92	1.296	0.419	0.021	0.03542	0.0007	0.416	350	14	224.3	4.4	1291	92	DISC	DISC	35.9
VR30_123	406	12	0.3084	0.0054	0.0429	0.00049	0.319	273.4	4.1	270.8	3	280	39	270.8	3	1.0
VR30_124	188	1.118	0.2021	0.0049	0.02846	0.00047	0.251	186.7	4.1	180.9	2.9	229	59	180.9	2.9	3.1
VR30_125	461	1.71	0.3444	0.0069	0.04521	0.00074	0.296	300.2	5.2	285	4.5	419	48	285	4.5	5.1
VR30_126	241.8	1.96	0.1983	0.006	0.02841	0.00053	0.122	183.4	5	180.6	3.3	219	63	180.6	3.3	1.5
VR30_127	497	1.705	0.2866	0.004	0.04047	0.00041	0.040	255.8	3.2	255.8	2.5	255	36	255.8	2.5	0.0
VR30_128	146	1.499	0.356	0.013	0.04343	0.00071	0.223	308.6	9.7	274.1	4.4	562	88	274.1	4.4	11.2
VR30_129	70.6	0.937	0.671	0.039	0.03366	0.00089	0.241	520	24	213.4	5.5	2310	100	DISC	DISC	59.0
VR08_1	149.7	0.924	0.2407	0.007	0.03305	0.00075	0.188	218.7	5.7	209.5	4.7	314	72	209.5	4.7	4.2
VR08_2	187.3	1.08	0.2865	0.0059	0.03948	0.00072	0.010	256.2	4.8	249.5	4.5	281	55	249.5	4.5	2.6
VR08_3	1222	1.42	0.3067	0.0034	0.04197	0.00039	0.528	271.6	2.6	265.1	2.4	309	25	265.1	2.4	2.4
VR08_4	1000	52	0.465	0.053	0.0542	0.0045	0.796	382	36	340	27	550	160	340	27	11.0
VR08_4	257	3.65	1.498	0.056	0.1375	0.0056	0.688	928	23	830	32	1147	59	830	32	10.6
VR08_5	304.9	0.792	0.2923	0.0074	0.03967	0.00066	0.474	260.8	5.7	250.8	4.1	302	53	250.8	4.1	3.8
VR08_6	234	1.716	0.2649	0.0068	0.03785	0.00056	0.098	238.4	5.4	239.5	3.5	209	62	239.5	3.5	0.5
VR08_7	497	2.5	0.342	0.01	0.04646	0.00088	0.773	298.4	7.6	292.7	5.4	329	40	292.7	5.4	1.9
VR08_8	997	2.81	0.2037	0.0026	0.02917	0.00035	0.195	188.5	2.3	185.3	2.2	210	38	185.3	2.2	1.7
VR08_9	797	3.1	0.3127	0.0037	0.04337	0.00044	0.284	276.2	2.8	273.7	2.7	277	31	273.7	2.7	0.9
VR08_11	125.6	1.109	0.2306	0.0084	0.0321	0.001	0.241	210.2	6.9	203.7	6.4	217	87	203.7	6.4	3.1
VR08_12	211.5	0.628	0.2762	0.0063	0.03906	0.00057	0.043	247.4	5	247	3.5	219	55	247	3.5	0.2
VR08_13	133	0.964	0.2516	0.0089	0.03547	0.00068	0.154	227.4	7.2	224.7	4.3	248	75	224.7	4.3	1.2
VR08_14	118	0.822	0.317	0.011	0.04119	0.00073	0.126	278.8	8.4	260.2	4.5	456	83	260.2	4.5	6.7
VR08_15	145	0.8	0.2399	0.0075	0.03383	0.00073	0.338	218	6.2	214.5	4.6	230	66	214.5	4.6	1.6

VR08_16	98.4	1.209	0.268	0.015	0.0333	0.0012	0.264	240	12	211.4	7.2	440	120	211.4	7.2	11.9
VR08_17	226	2.54	0.2213	0.0067	0.02953	0.00073	0.183	203.5	5.7	187.6	4.6	348	77	187.6	4.6	7.8
VR08_18	263	3	0.2865	0.0061	0.04013	0.00072	0.299	256.3	4.9	253.6	4.5	278	51	253.6	4.5	1.1
VR08_19	552	1.18	0.379	0.028	0.04588	0.00075	0.552	323	19	289.1	4.6	490	100	289.1	4.6	10.5
VR08_20	137	1.04	0.2088	0.0082	0.03043	0.00074	0.076	192.2	6.9	193.2	4.6	192	87	193.2	4.6	0.5
VR08_21	257	2.65	0.3112	0.0068	0.04252	0.00063	0.244	274.8	5.3	268.4	3.9	344	47	268.4	3.9	2.3
VR08_22	622	1.564	0.2099	0.0041	0.03048	0.00047	0.286	193.3	3.4	193.5	3	175	49	193.5	3	0.1
VR08_23	454	4.87	0.3275	0.0065	0.04469	0.00051	0.247	288.1	5.1	281.8	3.1	334	48	281.8	3.1	2.2
VR08_24	561	0.751	0.2978	0.0054	0.04231	0.00063	0.443	264.5	4.2	267.1	3.9	271	37	267.1	3.9	1.0
VR08_25	63.1	0.597	0.352	0.029	0.0392	0.0012	0.066	303	21	247.6	7.2	710	150	247.6	7.2	18.3
VR08_26	219	0.852	0.2747	0.0068	0.03874	0.00053	0.062	246.1	5.4	245	3.3	244	59	245	3.3	0.4
VR08_27	60.2	1.14	0.409	0.046	0.0381	0.0012	0.523	333	27	241.1	7.2	920	170	DISC	DISC	27.6
VR08_28	185	2.583	4.292	0.068	0.2969	0.0056	0.663	1694	14	1676	28	1725	28	1725	28	2.8
VR08_29	364	1.429	0.3028	0.0092	0.0413	0.0008	0.481	271.1	7	260.9	4.9	330	53	260.9	4.9	3.8
VR08_30	423.9	1.72	0.2027	0.0043	0.02835	0.00043	0.203	187.3	3.7	180.2	2.7	292	55	180.2	2.7	3.8
VR08_31	177	0.815	0.1974	0.0059	0.02839	0.00057	0.206	182.7	5	180.4	3.6	181	75	180.4	3.6	1.3
VR08_32	135	1.22	0.357	0.012	0.0495	0.0011	0.268	310.6	8.5	311.1	6.6	333	71	311.1	6.6	0.2
VR08_33	93.6	1.171	0.31	0.011	0.04258	0.00071	0.295	274.4	8	268.8	4.4	330	75	268.8	4.4	2.0
VR08_34	211	0.66	0.2801	0.0068	0.03945	0.00059	0.158	251.2	5.3	249.8	3.6	273	61	249.8	3.6	0.6
VR08_35	400	1.019	0.303	0.011	0.04103	0.00074	0.039	268.7	8.8	259.2	4.6	396	90	259.2	4.6	3.5
VR08_36	100.2	0.823	0.34	0.056	0.02849	0.00095	0.660	289	39	181.1	5.9	1260	280	DISC	DISC	37.3
VR08_37	138.1	1.472	0.2624	0.0079	0.03713	0.0006	0.012	236.2	6.3	235	3.7	285	73	235	3.7	0.5
VR08_38	135.5	0.761	0.286	0.015	0.0417	0.0011	0.034	255	11	263.2	6.6	200	120	263.2	6.6	3.2
VR08_39	456	1.263	0.2041	0.0072	0.02883	0.00062	0.341	188.5	6.1	183.2	3.9	269	81	183.2	3.9	2.8
VR08_40	298	1.74	0.2092	0.0055	0.03003	0.00041	0.054	192.7	4.6	190.7	2.5	244	66	190.7	2.5	1.0
VR08_41	208.2	2.628	0.2043	0.0051	0.02937	0.00053	0.195	188.6	4.3	186.6	3.3	238	61	186.6	3.3	1.1
VR08_42	383	6.54	0.2913	0.0063	0.04182	0.00073	0.452	260.1	4.8	264.1	4.5	215	47	264.1	4.5	1.5
VR08_43	486	1.427	0.2895	0.0093	0.0394	0.0011	0.136	257.8	7.3	248.8	6.8	317	70	248.8	6.8	3.5
VR08_44	120.8	0.616	0.72	0.13	0.0396	0.0013	0.841	530	72	250.5	7.7	1660	270	DISC	DISC	52.7
VR08_45	236	0.614	0.2913	0.0062	0.03972	0.00049	0.188	259.4	4.8	251.1	3	334	48	251.1	3	3.2

VR08_46	748	3.91	0.3185	0.0079	0.0422	0.001	0.556	281.7	6.3	266.4	6.3	383	51	266.4	6.3	5.4
VR08_46	268	2.4	0.35	0.01	0.04914	0.0008	0.345	304.4	7.6	309.2	4.9	269	61	309.2	4.9	1.6
VR08_47	217	1.99	0.2168	0.0058	0.03009	0.00051	0.274	199	4.8	191.1	3.2	311	62	191.1	3.2	4.0
VR08_48	333	1.313	0.2994	0.0051	0.04167	0.00056	0.266	265.8	4	263.1	3.5	282	44	263.1	3.5	1.0
VR08_49	238	0.906	0.2361	0.007	0.03331	0.00046	0.160	215.6	5.9	211.2	2.9	285	65	211.2	2.9	2.0
VR08_50	682	9.55	0.3419	0.0088	0.04595	0.0007	0.461	298.4	6.6	289.6	4.3	348	56	289.6	4.3	2.9
VR08_50	326	5	0.437	0.02	0.0586	0.002	0.797	367	14	367	12	377	67	367	12	0.0
VR08_51	288.9	1.823	0.208	0.0056	0.02912	0.00045	0.012	191.7	4.7	185	2.8	264	69	185	2.8	3.5
VR08_52	153.8	2.307	0.935	0.024	0.0998	0.0023	0.731	669	13	613	14	864	37	613	14	8.4
VR08_53	162	1.188	0.2527	0.0076	0.03635	0.00056	0.002	228.4	6.1	230.2	3.5	228	74	230.2	3.5	0.8
VR08_54	116	0.783	0.2234	0.0076	0.03177	0.00061	0.046	204.3	6.4	201.6	3.8	206	79	201.6	3.8	1.3
VR08_55	572	0.971	0.2972	0.0055	0.04061	0.00063	0.332	264.6	4.4	256.6	3.9	339	45	256.6	3.9	3.0
VR08_56	202	0.808	0.2366	0.0062	0.03428	0.0006	0.095	216.1	5	217.3	3.7	200	64	217.3	3.7	0.6
VR08_57	190	1.468	0.2039	0.0075	0.02889	0.0005	0.172	188	6.3	183.6	3.1	244	79	183.6	3.1	2.3
VR08_58	152.3	0.931	0.1973	0.0061	0.02685	0.00048	0.028	182.6	5.2	170.8	3	321	81	170.8	3	6.5
VR08_59	712	0.788	0.2748	0.0047	0.03779	0.00051	0.444	246.4	3.7	239.1	3.2	304	37	239.1	3.2	3.0
VR08_60	395	1.132	0.3052	0.006	0.04238	0.00057	0.271	270.8	4.7	267.6	3.5	278	45	267.6	3.5	1.2
VR08_61	634	1.437	0.3373	0.0087	0.04349	0.00037	0.305	295.6	6.7	274.4	2.3	452	55	274.4	2.3	7.2
VR08_62	96	2.29	0.301	0.012	0.0422	0.0011	0.086	269.6	8.6	266.1	6.8	257	94	266.1	6.8	1.3
VR08_63	143.1	1.203	0.2473	0.0076	0.03637	0.00058	0.055	224	6.2	230.3	3.6	154	74	230.3	3.6	2.8
VR08_64	753	2	0.3185	0.0042	0.044	0.00062	0.517	280.6	3.2	277.6	3.9	304	32	277.6	3.9	1.1
VR08_65	460	1.72	0.204	0.0043	0.02885	0.00048	0.449	188.4	3.6	183.3	3	210	45	183.3	3	2.7
VR08_66	528	3.54	0.3261	0.0054	0.04486	0.00066	0.467	286.4	4.2	282.8	4.1	291	34	282.8	4.1	1.3
VR08_67	234	0.573	0.33	0.015	0.04141	0.00058	0.187	289	11	261.6	3.6	470	100	261.6	3.6	9.5
VR08_68	166	10.9	0.2976	0.0075	0.04151	0.00076	0.268	265	5.7	262.2	4.7	274	58	262.2	4.7	1.1
VR08_69	152	0.862	0.2491	0.0078	0.03422	0.00075	0.406	225.5	6.3	216.9	4.6	290	62	216.9	4.6	3.8
VR08_70	255	0.904	0.2599	0.0071	0.03557	0.00048	0.120	234.3	5.7	225.3	3	292	66	225.3	3	3.8
VR08_71	286	1.769	0.2168	0.0071	0.0294	0.00051	0.127	199	6	186.8	3.2	326	76	186.8	3.2	6.1
VR08_72	104	0.436	0.229	0.012	0.0315	0.0011	0.179	209	9.5	199.8	7	250	120	199.8	7	4.4
VR08_73	75.3	1.75	0.281	0.016	0.0361	0.0015	0.286	251	13	228.6	9.5	370	130	228.6	9.5	8.9

VR08_74	218.2	0.46	0.204	0.0056	0.0285	0.00052	0.340	188.3	4.7	181.1	3.3	261	59	181.1	3.3	3.8
VR08_75	124.4	0.833	0.227	0.01	0.02976	0.00069	0.238	208.5	8.7	189	4.3	430	100	189	4.3	9.4
VR08_76	755	0.791	0.2932	0.0043	0.04095	0.00045	0.437	260.9	3.4	258.7	2.8	266	32	258.7	2.8	0.8
VR08_77	188.1	0.811	0.2992	0.0064	0.04194	0.0009	0.329	265.6	5	264.8	5.6	263	56	264.8	5.6	0.3
VR08_78	318	1.45	0.3133	0.0063	0.04384	0.00061	0.091	275.6	4.6	276.6	3.8	280	53	276.6	3.8	0.4
VR08_79	681	1.038	0.3176	0.0049	0.04416	0.00059	0.444	280	3.8	278.6	3.7	285	36	278.6	3.7	0.5
VR08_80	128	1.199	0.1942	0.0074	0.02711	0.0007	0.105	180.6	6.1	172.4	4.4	230	87	172.4	4.4	4.5
VR08_81	630	2.33	0.3079	0.0052	0.04115	0.00077	0.446	272.4	4.1	259.9	4.8	365	43	259.9	4.8	4.6
VR08_82	179.7	1.269	0.2506	0.007	0.03529	0.00061	0.165	226.7	5.7	223.6	3.8	246	67	223.6	3.8	1.4
VR08_83	331	1.298	0.362	0.013	0.04337	0.00091	0.437	315	10	273.7	5.6	674	62	273.7	5.6	13.1
VR08_84	358	2.92	0.3035	0.0089	0.0405	0.0011	0.507	268.9	7	255.6	6.9	379	55	255.6	6.9	4.9
VR08_85	65.8	0.897	0.351	0.02	0.0417	0.0013	0.088	303	15	263.4	7.8	550	130	263.4	7.8	13.1
VR08_86	199	1.031	0.217	0.021	0.02859	0.00059	0.184	191.3	7.7	181.7	3.7	260	93	181.7	3.7	5.0
VR08_87	158.4	0.616	0.255	0.023	0.03541	0.00078	0.023	221.7	8	224.3	4.9	184	93	224.3	4.9	1.2
VR08_88	180	9.35	0.398	0.041	0.0436	0.0012	0.084	333	27	275	7.3	630	170	275	7.3	17.4
VR08_89	153.3	1.099	0.6	0.11	0.0379	0.0013	0.045	432	53	239.5	8	1410	240	DISC	DISC	44.6
VR08_90	93	0.545	0.289	0.015	0.0396	0.0011	0.064	256	11	250.4	6.8	300	110	250.4	6.8	2.2
VR08_92	160	0.725	0.236	0.0078	0.03562	0.0007	0.124	215.6	6.2	225.6	4.4	165	74	225.6	4.4	4.6
VR08_94	1031	1.06	0.3075	0.0072	0.04246	0.00067	0.705	271.9	5.6	268.1	4.2	318	37	268.1	4.2	1.4
VR08_95	159.8	0.978	0.2505	0.0074	0.03559	0.00068	0.107	226.6	6	225.9	4.2	233	76	225.9	4.2	0.3
VR08_96	178.4	1.347	0.355	0.0081	0.04883	0.0009	0.084	308.2	6.1	307.3	5.5	329	68	307.3	5.5	0.3
VR08_97	125	1.141	0.3	0.011	0.04023	0.00072	0.085	265.5	8.3	254.2	4.4	347	84	254.2	4.4	4.3
VR08_98	584	4.11	0.2308	0.0063	0.03256	0.00089	0.091	210.8	5.2	206.5	5.6	274	87	206.5	5.6	2.0
VR08_98	449	1.84	0.3168	0.0067	0.0456	0.001	0.289	279.4	5.2	287.7	6.3	222	59	287.7	6.3	3.0
VR08_99	322	2.683	0.3298	0.0073	0.04612	0.00072	0.252	289.8	5.7	290.6	4.5	269	50	290.6	4.5	0.3
VR08_100	113.8	1.18	0.382	0.04	0.03849	0.00089	0.161	324	28	243.4	5.5	810	190	DISC	DISC	24.9
VR08_101	395	0.756	0.2105	0.0061	0.02882	0.00044	0.143	193.8	5.1	183.2	2.8	308	65	183.2	2.8	5.5
VR08_102	193	1.61	0.2912	0.0072	0.03993	0.00057	0.051	259.2	5.6	252.4	3.5	315	61	252.4	3.5	2.6
VR08_103	148	3.2	0.31	0.01	0.04277	0.00085	0.129	273.2	8.1	269.9	5.2	297	88	269.9	5.2	1.2
VR08_104	165.7	2.56	0.303	0.027	0.03992	0.00077	0.194	258	10	252.3	4.8	276	75	252.3	4.8	2.2

VR08_105	275.3	2.59	0.35	0.014	0.04526	0.00067	0.053	304	10	285.3	4.1	450	90	285.3	4.1	6.2
VR08_106	124.1	0.988	0.2627	0.0092	0.03662	0.00071	0.215	237.4	7.2	231.8	4.4	290	82	231.8	4.4	2.4
VR08_107	143	1.291	0.2527	0.0086	0.03745	0.00085	0.095	228.3	7	237	5.3	161	78	237	5.3	3.8
VR08_108	186	1.14	0.2826	0.0083	0.04056	0.00077	0.307	254.8	6.7	256.9	4.6	222	61	256.9	4.6	0.8
VR08_109	103.6	1.23	0.307	0.011	0.04247	0.00081	0.093	272	8.5	268.1	5	330	83	268.1	5	1.4
VR08_110	96	0.673	0.222	0.0082	0.03214	0.00066	0.090	203.1	6.8	203.9	4.1	211	81	203.9	4.1	0.4
VR08_113	127.1	1.366	0.2785	0.0089	0.03947	0.00069	0.019	249	7.1	249.5	4.3	257	77	249.5	4.3	0.2
VR08_114	1140	1.55	0.3222	0.0061	0.04451	0.00067	0.421	283.4	4.7	280.7	4.1	314	33	280.7	4.1	1.0
VR08_115	182	0.794	0.2436	0.0069	0.03454	0.00056	0.271	221	5.7	218.9	3.5	220	60	218.9	3.5	1.0
VR08_116	619	1.142	0.3013	0.0056	0.04273	0.00047	0.591	267.2	4.4	269.7	2.9	246	36	269.7	2.9	0.9
VR08_117	175.1	1.371	0.2202	0.008	0.03049	0.00065	0.090	201.6	6.6	193.6	4.1	275	76	193.6	4.1	4.0
VR08_118	51.7	0.711	0.226	0.013	0.0287	0.001	0.079	206	11	183.3	6.4	450	140	183.3	6.4	11.0
VR08_119	1105	1.702	0.299	0.011	0.04055	0.00086	0.479	264.9	8.6	256.2	5.3	382	40	256.2	5.3	3.3
VR08_120	635	22.1	0.3679	0.0074	0.0489	0.00079	0.459	317.9	5.5	307.8	4.9	380	43	307.8	4.9	3.2
VR08_121	880	1.94	0.3025	0.0072	0.0395	0.0011	0.817	268	5.6	249.5	7	442	36	249.5	7	6.9
VR08_123	245.2	1.473	0.3024	0.0066	0.04205	0.00057	0.042	269.3	5.1	265.5	3.5	284	55	265.5	3.5	1.4
VR08_124	212	1.104	0.3158	0.0077	0.04445	0.00078	0.326	278.3	5.9	280.3	4.8	255	52	280.3	4.8	0.7
VR08_125	258	1.463	0.341	0.013	0.0443	0.0014	0.492	297.9	9.6	279.2	8.4	432	84	279.2	8.4	6.3
VR08_125	408.1	0.815	0.622	0.018	0.0786	0.002	0.704	491	11	487	12	554	54	487	12	0.8
VR08_126	127.2	0.735	0.256	0.01	0.03437	0.00076	0.135	231	8.4	217.8	4.7	371	93	217.8	4.7	5.7
VR08_127	688	2.24	0.2919	0.0053	0.04116	0.00071	0.536	259.9	4.2	260	4.4	247	38	260	4.4	0.0
VR08_128	229.2	0.5934	0.344	0.022	0.0385	0.0006	0.305	298	17	243.5	3.7	710	130	243.5	3.7	18.3
VR08_129	274	2.157	0.2031	0.0048	0.0283	0.00041	0.146	188.7	4.3	179.9	2.5	287	59	179.9	2.5	4.7
VR08_130	102.1	0.907	0.37	0.042	0.03604	0.00082	0.664	312	29	228.2	5.1	780	180	DISC	DISC	26.9
Molles2_1	310	2.044	0.19	0.0052	0.02834	0.00044	0.015	176.4	4.4	180.1	2.7	124	60	180.1	2.7	2.1
Molles2_2	378	4.8	0.329	0.014	0.04429	0.00047	0.233	288	10	279.4	2.9	304	59	279.4	2.9	3.0
Molles2_3	189	1.93	0.3041	0.0078	0.04281	0.0007	0.422	270.8	5.8	270.2	4.3	291	57	270.2	4.3	0.2
Molles2_4	642	7.77	0.3104	0.0046	0.04386	0.00041	0.365	274.4	3.6	276.7	2.6	233	34	276.7	2.6	0.8

Molles2_5	30	10.4	0.631	0.088	0.073	0.0087	0.546	494	54	454	52	690	270	454	52	8.1
Molles2_5	142.9	1.198	7.5	0.13	0.3302	0.0049	0.733	2171	15	1843	23	2495	18	2495	18	26.1
Molles2_6	439	2.74	0.2056	0.0076	0.02998	0.00066	0.215	189.7	6.4	190.4	4.1	199	91	190.4	4.1	0.4
Molles2_6	229.1	2.119	0.326	0.011	0.045	0.0014	0.273	286.4	8.3	283.5	8.9	338	89	283.5	8.9	1.0
Molles2_7	263	12.1	0.3139	0.0067	0.04419	0.00054	0.368	276.9	5.1	278.7	3.3	251	45	278.7	3.3	0.7
Molles2_8	240	2.134	0.1792	0.0059	0.02663	0.00045	0.209	167.7	5	169.4	2.8	172	72	169.4	2.8	1.0
Molles2_9	53.1	3.24	0.294	0.017	0.0393	0.001	0.065	261	13	248.8	6.3	350	140	248.8	6.3	4.7
Molles2_10	989	3.338	0.3229	0.0037	0.04485	0.00052	0.025	284.1	2.9	282.8	3.2	307	32	282.8	3.2	0.5
Molles2_11	462	2.84	0.3316	0.0072	0.04546	0.00062	0.357	290.6	5.5	286.6	3.8	324	45	286.6	3.8	1.4
Molles2_12	533	1.685	0.1976	0.0031	0.02886	0.0003	0.223	183	2.6	183.4	1.9	173	40	183.4	1.9	0.2
Molles2_13	448	1.535	0.2023	0.0075	0.0287	0.0011	0.425	186.9	6.4	182.2	6.9	269	76	182.2	6.9	2.5
Molles2_14	60	3.74	0.282	0.012	0.04093	0.00089	0.169	251.4	9.9	258.5	5.5	221	98	258.5	5.5	2.8
Molles2_15	576	13.8	0.3235	0.0047	0.04568	0.00054	0.300	285	3.5	287.9	3.4	299	40	287.9	3.4	1.0
Molles2_16	723	2.78	0.3245	0.0033	0.04484	0.00043	0.409	285.3	2.6	282.7	2.7	296	25	282.7	2.7	0.9
Molles2_17	293	1.345	0.2011	0.0049	0.02869	0.00038	0.148	186	4.1	182.3	2.4	255	59	182.3	2.4	2.0
Molles2_18	446	8.7	0.3403	0.0064	0.04719	0.00072	0.446	297.2	4.8	297.2	4.4	276	40	297.2	4.4	0.0
Molles2_19	54.6	1.16	0.309	0.025	0.0393	0.001	0.620	264	12	248.7	6.4	390	120	248.7	6.4	5.8
Molles2_20	1206	41.7	0.4176	0.0088	0.0553	0.0019	0.543	354.3	6.3	347	11	409	64	347	11	2.1
Molles2_20	636	28.4	1.756	0.059	0.1704	0.005	0.593	1029	22	1014	28	1056	56	1056	56	4.0
Molles2_20	504	2.89	1.974	0.052	0.1765	0.0054	0.792	1106	18	1048	30	1220	33	1220	33	14.1
Molles2_21	960	25.5	0.3268	0.0044	0.04548	0.00062	0.696	287.4	3.4	286.7	3.8	284	27	286.7	3.8	0.2
Molles2_22	265	1.16	0.2084	0.0055	0.02855	0.00048	0.195	192.7	4.8	181.5	3	319	70	181.5	3	5.8
Molles2_23	253	3.44	0.3235	0.0079	0.04452	0.00062	0.235	284.3	6.1	280.8	3.8	295	57	280.8	3.8	1.2
Molles2_24	34.4	0.488	0.246	0.016	0.0355	0.0011	0.007	222	13	224.7	6.8	180	140	224.7	6.8	1.2
Molles2_25	422	1.664	0.198	0.004	0.02847	0.00045	0.255	183.3	3.4	181	2.8	212	50	181	2.8	1.3
Molles2_26	311	1.72	0.1924	0.0048	0.02785	0.00036	0.137	178.5	4.1	177.1	2.3	213	58	177.1	2.3	0.8
Molles2_27	92	1.909	0.205	0.011	0.02902	0.00093	0.018	191.1	9.7	184.4	5.8	300	120	184.4	5.8	3.5
Molles2_29	595	2.08	0.2052	0.0043	0.02899	0.00039	0.311	189.4	3.6	184.2	2.4	253	44	184.2	2.4	2.7
Molles2_30	114.1	1.778	0.3291	0.0086	0.0442	0.00084	0.122	289.3	6.4	278.8	5.2	347	78	278.8	5.2	3.6
Molles2_31	578	0.837	0.2813	0.0041	0.03973	0.00038	0.127	251.6	3.3	251.2	2.3	245	36	251.2	2.3	0.2

Molles2_32	280	1.138	0.245	0.013	0.03009	0.00051	0.181	221	10	191.1	3.2	570	120	191.1	3.2	13.5
Molles2_33	99	1.28	0.3154	0.008	0.04297	0.0008	0.145	278	6.2	271.2	4.9	331	60	271.2	4.9	2.4
Molles2_34	241	7.4	0.3262	0.0084	0.0443	0.00077	0.321	287.2	6.3	279.4	4.7	395	54	279.4	4.7	2.7
Molles2_35	254	7.07	0.511	0.021	0.05852	0.00098	0.436	417	14	366.6	6	683	66	366.6	6	12.1
Molles2_36	560	1.807	0.1982	0.0044	0.02868	0.0004	0.240	183.5	3.7	182.3	2.5	220	55	182.3	2.5	0.7
Molles2_37	264	2.68	0.3078	0.0067	0.04196	0.0005	0.201	272.3	5.2	265	3.1	314	48	265	3.1	2.7
Molles2_38	159	1.111	0.232	0.011	0.02942	0.00087	0.088	211.7	9.1	186.9	5.5	460	120	186.9	5.5	11.7
Molles2_38	154.1	3.25	0.256	0.013	0.0365	0.0017	0.252	231	11	231	11	270	140	231	11	0.0
Molles2_39	331.7	1.926	0.211	0.017	0.02885	0.00042	0.153	188.7	9.9	183.4	2.6	171	77	183.4	2.6	2.8
Molles2_40	37.1	0.742	0.31	0.075	0.0356	0.0011	0.017	244	13	225.7	6.7	400	130	225.7	6.7	7.5
Molles2_41	411	10.9	0.3058	0.0057	0.04322	0.00065	0.189	270.8	4.4	272.7	4	279	48	272.7	4	0.7
Molles2_41	343	5.69	0.387	0.011	0.0504	0.0016	0.344	331.7	8.4	317	9.8	435	78	317	9.8	4.4
Molles2_42	270	19.4	0.2994	0.0059	0.0415	0.00045	0.138	266.4	4.7	262.1	2.8	288	49	262.1	2.8	1.6
Molles2_43	216	1.31	0.2059	0.0059	0.02885	0.00053	0.280	190.6	4.8	183.3	3.3	240	60	183.3	3.3	3.8
Molles2_44	632	11.13	0.3043	0.006	0.04259	0.0006	0.417	269.7	4.7	268.8	3.7	276	40	268.8	3.7	0.3
Molles2_44	414.9	7.13	0.408	0.011	0.0541	0.0012	0.626	347.3	7.8	339.7	7.4	407	55	339.7	7.4	2.2
Molles2_45	253.1	1.009	0.277	0.022	0.02802	0.0006	0.007	247	17	178.1	3.8	920	170	DISC	DISC	27.9
Molles2_46	1138	113	0.325	0.0052	0.04479	0.00046	0.322	285.7	4	282.4	2.9	313	27	282.4	2.9	1.2
Molles2_47	888	11	0.3168	0.0038	0.04424	0.00051	0.400	279.8	2.8	279	3.1	290	28	279	3.1	0.3
Molles2_48	304	1.72	0.56	0.014	0.0722	0.0012	0.680	450.6	9.2	449.5	7	482	41	449.5	7	0.2
Molles2_49	218	2.3	0.1978	0.0047	0.02873	0.00048	0.006	183.1	4	183	2.9	212	58	183	2.9	0.1
Molles2_50	508	3.85	0.3154	0.0058	0.04335	0.0005	0.487	278.2	4.4	273.5	3.1	290	38	273.5	3.1	1.7
Molles2_51	18.44	0.641	0.338	0.032	0.0394	0.0015	0.031	291	24	249.1	9.1	540	200	249.1	9.1	14.4
Molles2_52	64	0.802	0.27	0.012	0.03684	0.00088	0.050	241.4	9.7	233.2	5.4	320	100	233.2	5.4	3.4
Molles2_53	298.2	1.426	0.1845	0.007	0.02674	0.00063	0.373	171.7	6	170.1	4	206	76	170.1	4	0.9
Molles2_54	21.8	0.752	0.277	0.029	0.0374	0.0015	0.292	249	22	236.8	9.6	320	210	236.8	9.6	4.9
Molles2_55	166	3.28	0.319	0.011	0.0441	0.0012	0.107	280.8	8.8	277.8	7.1	314	80	277.8	7.1	1.1
Molles2_56	35.2	0.822	0.274	0.019	0.0373	0.0012	0.427	244	15	236.2	7.3	280	130	236.2	7.3	3.2
Molles2_57	101	0.77	0.2498	0.0086	0.02897	0.00081	0.177	226.1	7	184.1	5.1	620	100	184.1	5.1	18.6
Molles2_58	31.2	0.787	0.259	0.014	0.0371	0.0011	0.135	234	12	234.8	6.9	240	130	234.8	6.9	0.3

Molles2_59	194	5.84	0.2598	0.0085	0.03703	0.00079	0.328	235	6.7	234.4	4.9	246	63	234.4	4.9	0.3
Molles2_60	432	1.525	0.2002	0.0038	0.02925	0.00033	0.201	185.2	3.2	185.8	2.1	184	44	185.8	2.1	0.3
Molles2_61	543	8.3	0.3289	0.0071	0.04174	0.00075	0.067	289.2	5.3	263.6	4.6	477	56	263.6	4.6	8.9
Molles2_62	104.5	1.977	0.414	0.012	0.0534	0.00092	0.093	351.1	8.4	335.3	5.6	424	78	335.3	5.6	4.5
Molles2_63	468	1.488	0.211	0.0045	0.02938	0.00042	0.011	194.3	3.8	186.7	2.6	275	60	186.7	2.6	3.9
Molles2_64	35.8	0.843	0.269	0.022	0.0343	0.0011	0.211	239	17	217.3	6.8	390	170	217.3	6.8	9.1
Molles2_65	439.7	1.267	0.1776	0.0045	0.02602	0.00033	0.012	165.9	3.8	165.6	2.1	154	56	165.6	2.1	0.2
Molles2_66	800	12.3	0.316	0.01	0.0428	0.001	0.599	278.4	8	270.4	6.5	335	59	270.4	6.5	2.9
Molles2_67	238	1.548	0.1983	0.0052	0.02865	0.00045	0.069	184.2	4.5	182.1	2.8	195	58	182.1	2.8	1.1
Molles2_68	328	1.108	0.1823	0.0046	0.02672	0.0004	0.164	169.9	3.9	170	2.5	177	55	170	2.5	0.1
Molles2_69	192.7	1.593	0.2029	0.0053	0.02858	0.00049	0.225	187.4	4.5	181.7	3.1	272	66	181.7	3.1	3.0
Molles2_70	160.7	1.52	0.257	0.011	0.03007	0.00096	0.126	232.1	8.9	190.9	6	590	110	190.9	6	17.8
Molles2_71	165	1.969	0.1986	0.0068	0.02642	0.0007	0.084	183.8	5.7	168.1	4.4	364	93	168.1	4.4	8.5
Molles2_72	241	3.85	0.3027	0.0072	0.04234	0.00053	0.176	268.3	5.6	267.3	3.3	273	55	267.3	3.3	0.4
Molles2_73	61	1	0.286	0.015	0.0392	0.001	0.166	254	12	247.8	6.2	290	110	247.8	6.2	2.4
Molles2_74	355	1.443	0.2052	0.0073	0.02861	0.00036	0.203	189.4	6.1	181.9	2.3	295	82	181.9	2.3	4.0
Molles2_75	846	2.79	0.384	0.011	0.04394	0.00036	0.019	329.5	7.9	277.2	2.2	704	64	277.2	2.2	15.9
Molles2_76	396	0.921	0.1945	0.0045	0.02775	0.00034	0.135	180.3	3.9	176.4	2.1	224	58	176.4	2.1	2.2
Molles2_77	738	4.36	0.3195	0.0052	0.04382	0.00047	0.293	281.4	4	276.5	2.9	299	34	276.5	2.9	1.7
Molles2_78	385	1.28	0.3179	0.0053	0.04381	0.00056	0.378	280.1	4.1	276.4	3.5	302	41	276.4	3.5	1.3
Molles2_79	164	0.723	0.2631	0.0071	0.03805	0.00071	0.221	238.4	5.4	240.7	4.4	218	61	240.7	4.4	1.0
Molles2_80	685	1.057	0.1802	0.0032	0.02628	0.00032	0.443	168.2	2.8	167.2	2	180	34	167.2	2	0.6
Molles2_81	57.56	0.849	0.25	0.016	0.02741	0.00084	0.004	226	13	174.3	5.3	790	170	DISC	DISC	22.9
Molles2_82	550	1.035	0.1906	0.0044	0.02704	0.00028	0.033	177.1	3.7	172	1.7	223	55	172	1.7	2.9
Molles2_83	569	3.76	0.3316	0.0054	0.04622	0.0006	0.485	290.6	4.1	291.3	3.7	279	33	291.3	3.7	0.2
Molles2_84	211	1.605	0.2069	0.0056	0.02928	0.00056	0.208	190.8	4.7	186	3.5	195	70	186	3.5	2.5
Molles2_85	35.7	0.559	0.308	0.022	0.0381	0.0013	0.071	273	16	241.2	7.8	460	160	241.2	7.8	11.6
Molles2_86	330	5.6	0.2977	0.0078	0.04061	0.0008	0.495	264.4	6.1	256.6	4.9	295	55	256.6	4.9	3.0
Molles2_87	481	5.02	0.3045	0.0048	0.04232	0.00045	0.325	269.8	3.7	267.2	2.8	305	40	267.2	2.8	1.0
Molles2_88	76.7	0.82	0.253	0.013	0.03437	0.00088	0.168	228	11	217.8	5.5	320	120	217.8	5.5	4.5

Molles2_89	49.8	1.048	0.262	0.016	0.0314	0.0015	0.215	238	13	199.4	9.2	690	130	199.4	9.2	16.2
Molles2_90	232	2.67	0.2855	0.0062	0.0408	0.00054	0.185	255.4	5	257.8	3.4	203	50	257.8	3.4	0.9
Molles2_91	123	1.133	0.1984	0.0065	0.02898	0.00052	0.020	184.2	5.7	184.1	3.3	199	84	184.1	3.3	0.1
Molles2_92	140	3.33	0.281	0.0093	0.03914	0.0007	0.016	251	7.3	247.4	4.3	284	81	247.4	4.3	1.4
Molles2_93	349	0.965	0.1952	0.0081	0.02627	0.00078	0.357	182.6	7.4	167.2	4.9	344	90	167.2	4.9	8.4
Molles2_94	218.4	2.125	0.873	0.075	0.0477	0.0012	0.237	630	38	300.5	7.4	2100	110	DISC	DISC	52.3
Molles2_95	1130	25.5	0.312	0.013	0.043	0.0017	0.779	275.6	9.8	271	10	294	45	271	10	1.7
Molles2_95	292	1.16	0.865	0.017	0.1027	0.0014	0.631	632.4	9.4	630.1	8.1	628	32	630.1	8.1	0.4
Molles2_96	258	2.5	0.741	0.063	0.04852	0.0009	0.129	557	36	305.4	5.5	1700	150	DISC	DISC	45.2
Molles2_97	135	2.53	0.3047	0.0088	0.04368	0.00091	0.357	269.6	6.8	275.5	5.6	205	60	275.5	5.6	2.2
Molles2_98	436	7.01	0.2941	0.0067	0.04094	0.0005	0.331	261.7	5.2	258.6	3.1	263	50	258.6	3.1	1.2
Molles2_98	431	6.95	0.567	0.016	0.0724	0.0016	0.629	456	10	450.4	9.8	457	42	450.4	9.8	1.2
Molles2_99	274	2.015	0.1837	0.0054	0.0269	0.00038	0.064	171	4.7	171.1	2.4	183	64	171.1	2.4	0.1
Molles2_100	1350	48.2	0.423	0.021	0.0459	0.0013	0.173	356	15	289.3	8.2	740	110	289.3	8.2	18.7
Molles2_101	903	9.04	0.382	0.014	0.03921	0.00098	0.280	328	11	247.9	6	910	110	DISC	DISC	24.4
Molles2_101	198.6	2.355	1.196	0.043	0.1103	0.0025	0.731	797	20	674	15	1169	49	674	15	15.4
Molles2_102	520	2.9	0.3233	0.0056	0.0437	0.00048	0.300	284.9	4.2	275.7	2.9	331	38	275.7	2.9	3.2
Molles2_103	32.1	0.718	0.26	0.014	0.0341	0.0012	0.000	235	11	216.9	7.5	410	140	216.9	7.5	7.7
Molles2_104	400	11.54	0.2934	0.005	0.041	0.00055	0.362	261.1	3.9	259	3.4	327	45	259	3.4	0.8
Molles2_105	583	6.32	0.2901	0.0046	0.0411	0.00046	0.351	258.5	3.6	259.6	2.8	258	37	259.6	2.8	0.4
Molles2_106	202.6	3.33	0.2965	0.0065	0.04243	0.00056	0.099	263.5	5.1	267.8	3.5	238	53	267.8	3.5	1.6
Molles2_107	767	2.75	0.3179	0.0049	0.04437	0.00043	0.569	280.1	3.8	279.8	2.7	281	29	279.8	2.7	0.1
Molles2_108	450	4.9	0.3351	0.0072	0.04651	0.00064	0.465	293.2	5.5	293	4	299	44	293	4	0.1
Molles2_109	28.1	1.019	0.383	0.035	0.0351	0.0015	0.242	324	25	222.4	9.2	1020	200	DISC	DISC	31.4
Molles2_110	826	42.6	0.443	0.024	0.0542	0.0016	0.003	371	17	340.4	9.7	580	110	340.4	9.7	8.2
Molles2_110	494	2.974	1.714	0.042	0.1645	0.0041	0.783	1013	16	981	23	1095	30	1095	30	10.4
Molles2_111	169	5.54	0.3008	0.0085	0.04007	0.00072	0.186	266.7	6.6	253.3	4.5	356	66	253.3	4.5	5.0
Molles2_112	46	0.68	0.263	0.013	0.0361	0.001	0.046	239	10	228.8	6.5	300	100	228.8	6.5	4.3
Molles2_113	471.8	1.888	0.198	0.0036	0.02862	0.00037	0.157	183.4	3	181.9	2.3	242	48	181.9	2.3	0.8
Molles2_114	129	1.314	0.25	0.014	0.02918	0.00062	0.148	225	11	185.4	3.9	640	120	185.4	3.9	17.6

Molles2_115	180	1.589	0.257	0.016	0.02639	0.00039	0.058	233	13	167.9	2.5	930	140	DISC	DISC	27.9
Molles2_116	323.9	1.331	0.1824	0.0037	0.02651	0.00034	0.237	170	3.2	168.7	2.1	200	50	168.7	2.1	0.8
Molles2_117	43	0.587	0.283	0.02	0.0357	0.0012	0.001	251	16	226.1	7.8	450	160	226.1	7.8	9.9
Molles2_118	651	1.577	0.1844	0.003	0.02689	0.00029	0.328	171.8	2.6	171	1.8	192	40	171	1.8	0.5
Molles2_119	235	1.766	0.1868	0.0059	0.02817	0.00042	0.162	173.7	5	179.1	2.7	139	68	179.1	2.7	3.1
Molles2_120	231	1.214	0.189	0.0058	0.02755	0.00049	0.190	175.6	4.9	175.2	3	179	67	175.2	3	0.2
Molles2_121	327	2.324	0.194	0.0042	0.02819	0.0004	0.127	179.9	3.6	179.2	2.5	208	56	179.2	2.5	0.4
Molles2_122	753	2.65	0.353	0.012	0.03905	0.00042	0.324	306	9.2	247	2.6	794	86	247	2.6	19.3
Molles2_123	150	2.351	0.34	0.011	0.04604	0.00067	0.065	298.9	8.5	290.2	4.1	396	76	290.2	4.1	2.9
Molles2_124	246.8	4.77	0.3186	0.0062	0.04448	0.00065	0.162	280.7	4.8	281.1	4.1	279	47	281.1	4.1	0.1
Molles2_125	388	1.74	0.1895	0.0037	0.0278	0.00038	0.229	176.1	3.2	176.8	2.4	166	46	176.8	2.4	0.4
Molles2_126	139.7	1.605	0.1897	0.0063	0.02683	0.00053	0.155	176.1	5.4	170.6	3.3	289	75	170.6	3.3	3.1
Molles2_127	372	2.6	0.3181	0.0062	0.0439	0.00054	0.265	280.2	4.8	277	3.3	300	44	277	3.3	1.1
Molles2_128	28.1	1.387	0.252	0.016	0.0345	0.0011	0.088	229	13	218.4	7.1	320	140	218.4	7.1	4.6
Molles2_129	184	3.6	0.3203	0.0086	0.04414	0.00096	0.029	282	6.6	278.4	5.9	338	74	278.4	5.9	1.3
Molles2_129	226	1.97	0.609	0.023	0.0773	0.0028	0.725	482	15	480	17	537	66	480	17	0.4
Molles2_130	550	1.295	0.198	0.0037	0.02913	0.00038	0.403	183.3	3.1	185.1	2.4	171	40	185.1	2.4	1.0

Table 3a: Zircon (U-Th)/He Ages And Isotopic Data: Chapters 1,2,3, and 4

Table 3a: Charleston-Nebo Salient: East and South of Provo

Reduced (U-Th[Sm])/He Data															
Sample	**mineral**	**Age, Ma**	**err., Ma**	**U (ppm)**	**Th (ppm)**	**147Sm (ppm)**	**[U]e**	**Th/U**	**He (nmol/g)**	**mass (ug)**	**Ft**	**ESR**		**Best age**	**error**
zKNC01-1	zircon	389.4	31.15	196.9	63.6	3.1	211.5	0.32	314.6	1.90	0.69	36.41		1047	12
zKNC01-2	zircon	418.5	33.48	44.9	41.7	0.8	54.5	0.93	101.6	8.70	0.80	59.92		1651	15
zKNC01-10	zircon	461.5	36.92	67.2	32.8	0.8	74.8	0.49	132.7	2.08	0.69	36.94		1030	10
zKNC01-11	zircon	608.2	48.66	74.6	64.6	1.4	89.5	0.87	234.2	5.51	0.76	49.97		1948	12
zKNC01-13	zircon	307.5	24.60	104.4	50.8	0.9	116.1	0.49	135.9	2.10	0.69	36.93		1633	15
zKNC01-14	zircon	299.0	23.92	375.8	101.2	2.5	399.1	0.27	521.5	7.18	0.79	56.30		1663	15
zKNC01-16	zircon	365.1	29.21	144.4	67.6	1.2	160.0	0.47	224.8	2.03	0.70	37.57		922	12
zKNC01-18	zircon	403.4	32.27	76.8	48.7	1.9	88.0	0.63	150.4	5.52	0.76	49.60		1045	18
zKNC01-23	zircon	291.4	23.3	132.3	35.5	0.1	140.4	0.3	164.17	2.9	0.73	42.09		1137	14
zKNC01-27	zircon	397.6	31.80	58.4	34.3	1.0	66.3	0.59	110.8	4.54	0.76	48.33		1497	12
zKNC01-29	zircon	379.9	30.39	138.7	66.0	1.0	153.9	0.48	221.1	1.88	0.68	35.95		1665	16
zKNC01-31	zircon	339.2	27.14	124.4	59.1	1.3	138.0	0.48	183.3	2.66	0.71	39.53		324.4	3.4
zKNC01-37	zircon	379.8	30.38	88.2	58.7	1.4	101.7	0.67	154.4	3.02	0.72	41.80		1901	12
zKNC01-38	zircon	328.0	26.24	77.5	28.9	0.7	84.2	0.37	114.2	3.78	0.75	46.10		2824	10
zKNC01-40	zircon	361.0	28.88	141.8	99.6	2.8	164.7	0.70	226.9	2.01	0.69	37.17		1655	16
zKNC01-41	zircon	446.2	35.70	321.5	54.8	3.0	334.2	0.17	610.3	3.56	0.73	42.84		1490.7	7.5
zKNC01-43	zircon	555.4	44.43	156.5	132.6	6.3	187.0	0.85	435.1	3.95	0.75	46.44		1836	17
zKNC01-49	zircon	1078.1	86.25	106.5	207.9	2.0	154.3	1.95	715.2	3.68	0.74	45.98		2733.1	9.7
zKNC01-54	zircon	303.0	24.2	85.2	125.1	1.2	114.0	1.47	148.94	7.7	0.78	55.17		1044	12
zKNC01-59	zircon	485.7	38.86	193.7	130.8	1.4	223.8	0.68	455.1	4.08	0.75	46.82		2029.4	5.6
zKNC01-61	zircon	433.8	34.70	32.8	52.7	1.1	44.9	1.61	77.9	2.96	0.72	42.32		2735.2	9.1
zKNC01-68	zircon	298.9	23.91	82.9	56.2	1.6	95.9	0.68	114.5	3.02	0.73	42.43		577.7	6.6
zKNC01-72	zircon	408.0	32.64	163.3	93.6	1.3	184.8	0.57	310.8	3.77	0.74	45.22		1472	11
zKNC01-74	zircon	635.3	50.82	188.8	90.7	6.6	209.7	0.48	487.4	1.43	0.65	32.13		1898	13

zKNC01-76	zircon	335.3	26.83	74.7	49.0	0.8	86.0	0.66	125.8	6.72	0.79	56.20		2741.9	9.9
zKNC01-77	zircon	306.8	24.5	25.9	16.1	2.5	29.6	0.62	36.64	3.3	0.73	43.32		1822	12
zKNC01-82	zircon	622.1	49.8	29.0	13.5	0.1	32.1	0.46	95.37	19.7	0.84	74.72		2490	13
zKNC01-85	zircon	509.6	40.77	77.7	61.9	0.7	91.9	0.80	189.7	2.98	0.72	42.42		434.3	5.6
zKNC01-112	zircon	450.8	36.06	198.3	145.5	1.2	231.8	0.73	410.0	2.44	0.70	39.31		1628	10
zKNC01-113	zircon	573.8	45.90	76.7	45.0	1.2	87.1	0.59	196.0	2.23	0.70	38.22		2488.6	6.5
zKNC01-119	zircon	266.2	21.29	183.4	51.8	2.5	195.3	0.28	201.1	2.38	0.70	38.33		505.8	5
zKNC02-04	zircon	131.7	10.54	41.0	52.0	3.9	53.0	1.27	27.8	3.55	0.73	44.00		1637	18
zKNC02-05	zircon	279.5	22.36	137.2	87.0	1.2	157.2	0.63	173.4	2.72	0.72	41.04		1685	11
zKNC02-18	zircon	238.9	19.11	325.7	113.6	2.5	351.8	0.35	329.3	2.39	0.71	40.01		1744	12
zKNC02-21	zircon	853.6	68.29	112.7	124.2	1.7	141.3	1.10	494.4	2.77	0.71	41.35		2731	8.4
zKNC02-28	zircon	271.6	21.73	369.6	120.6	6.9	397.4	0.33	406.3	1.83	0.69	35.87		1003	14
zKNC02-30	zircon	299.3	23.95	163.5	108.4	2.6	188.5	0.66	216.0	2.22	0.70	37.83		1638	7.5
zKNC02-39	zircon	277.3	22.19	61.0	44.9	0.9	71.4	0.74	84.2	6.14	0.77	52.06		454.4	7.3
zKNC02-43	zircon	421.6	33.73	132.1	62.7	1.6	146.6	0.47	243.7	2.58	0.71	39.61		1463.6	6.6
zKNC02-46	zircon	349.6	27.97	149.9	84.3	2.0	169.3	0.56	221.7	1.77	0.68	35.43		1061	10
zKNC02-51	zircon	329.5	26.36	42.3	25.9	0.8	48.3	0.61	61.3	2.38	0.70	38.10		1157	14
zKNC02-52	zircon	351.2	28.09	285.2	70.2	4.1	301.4	0.25	400.6	1.79	0.69	35.68		1871	12
zKNC02-59	zircon	366.7	29.34	76.7	52.9	0.9	88.9	0.69	121.9	1.85	0.68	35.45		2812	10
zKNC02-60	zircon	1010.0	80.80	27.3	13.8	0.7	30.5	0.51	127.7	2.85	0.71	39.84		1090	12
zKNC02-64	zircon	441.2	35.30	137.1	54.0	1.3	149.6	0.39	263.9	2.92	0.72	40.75		1591	12
zKNC02-65	zircon	138.7	11.10	34.2	26.7	1.2	40.3	0.78	22.6	3.66	0.74	45.55		2731.4	8.8
zKNC02-67	zircon	297.7	23.82	36.4	46.2	1.3	47.1	1.27	56.4	3.67	0.73	43.88		1078	27
zKNC02-75	zircon	304.2	24.33	205.2	47.7	2.1	216.2	0.23	273.7	4.57	0.75	46.93		466	12
zKNC02-99	zircon	285.5	22.84	82.9	62.2	1.4	97.2	0.75	110.1	2.93	0.72	41.75		446.7	6.5
zKNC02-102	zircon	316.7	25.34	106.6	42.3	1.0	116.3	0.40	153.7	4.25	0.76	47.59		465.1	5.5
zKNC02-108	zircon	428.5	34.28	117.6	36.3	0.7	126.0	0.31	213.3	2.58	0.71	39.40		1506	9.1
zKNC03-01	zircon	188.0	15.04	168.5	87.7	1.4	188.7	0.52	137.7	2.85	0.71	39.68		447.8	4.9

zKNC03-02	zircon	169.9	13.59	240.8	68.9	0.8	256.7	0.29	167.3	2.29	0.70	38.18		1972	6.1
zKNC03-05	zircon	135.4	10.83	207.0	88.6	1.5	227.4	0.43	116.8	2.15	0.70	37.61		1633	16
zKNC03-07	zircon	191.8	15.34	341.2	154.1	2.0	376.7	0.45	300.0	4.63	0.76	48.55		1809.3	5.5
zKNC03-08	zircon	209.9	16.79	156.4	71.7	1.0	172.9	0.46	141.5	2.46	0.71	39.91		1491.6	9.4
zKNC03-09	zircon	143.7	11.49	146.0	86.3	1.2	165.9	0.59	94.0	3.03	0.72	41.91		1647	14
zKNC03-19	zircon	436.1	34.89	163.9	97.0	1.0	186.3	0.59	311.3	2.25	0.69	36.93		2829.1	9.8
zKNC03-24	zircon	154.5	12.36	159.8	106.7	1.2	184.4	0.67	113.2	3.19	0.73	42.85		449.6	6.7
zKNC03-29	zircon	103.3	8.26	26.8	28.1	0.6	33.3	1.05	13.9	3.89	0.74	46.18		2632	14
zKNC03-30	zircon	159.5	12.76	167.0	91.4	2.3	188.1	0.55	119.9	3.49	0.73	43.40		1755	11
zKNC03-38	zircon	141.0	11.28	78.2	60.1	0.9	92.0	0.77	50.6	3.03	0.72	40.98		1071	14
zKNC03-44	zircon	248.3	19.87	89.5	54.9	0.8	102.1	0.61	102.3	3.65	0.73	43.97		1063	17
zKNC03-50	zircon	200.6	16.04	75.5	47.8	1.5	86.5	0.63	69.9	3.56	0.74	44.18		1121	16
zKNC03-63	zircon	134.5	10.76	257.3	115.9	2.9	284.0	0.45	158.1	5.49	0.76	48.59		449.1	5
zKNC03-68	zircon	352.7	28.22	240.2	47.7	1.0	251.2	0.20	347.4	2.43	0.71	38.87		2689.1	8.7
zKNC03-75	zircon	381.8	30.54	83.9	66.7	1.3	99.3	0.79	155.1	3.92	0.74	44.88		1090	12
zKNC03-89	zircon	169.6	13.57	130.4	87.0	1.1	150.5	0.67	99.9	2.91	0.72	41.05		439.1	3.9
zKNC03-93	zircon	233.8	18.71	147.7	66.3	1.1	162.9	0.45	162.5	6.09	0.78	52.76		1993.7	6.5
zKNC03-96	zircon	105.0	8.40	38.3	31.7	0.6	45.6	0.83	19.4	3.72	0.74	46.05		1032	11
zKNC03-108	zircon	279.2	22.34	181.8	80.3	3.0	200.3	0.44	238.9	6.11	0.78	52.29		461.6	5.1
zKNC03-116	zircon	132.1	10.57	129.2	101.4	6.1	152.5	0.79	82.1	4.04	0.75	46.59		1103	13
zKNC03-119	zircon	150.8	12.07	62.3	57.5	11.8	75.6	0.92	44.7	3.31	0.72	41.53		367.5	5.1
zKNC03-100	zircon	247.2	19.77	47.8	52.2	0.9	59.8	1.09	60.0	3.96	0.74	45.25		1990	12
zKNC04-12	zircon	300.9	24.07	163.9	89.0	3.5	184.4	0.54	230.8	4.71	0.75	47.67		599.5	4.3
zKNC04-15	zircon	495.9	39.67	105.4	94.8	4.6	127.2	0.90	254.2	3.34	0.72	42.04		597.2	5.5
zKNC04-17	zircon	554.8	44.38	140.4	136.8	10.4	171.9	0.97	391.1	3.57	0.73	43.78		998	9.4
zKNC04-23	zircon	501.7	40.14	39.9	25.3	2.5	45.8	0.63	95.9	4.14	0.75	46.20		1471	12
zKNC04-24	zircon	315.3	25.22	127.2	51.2	3.7	139.0	0.40	174.5	3.30	0.72	41.42		576.1	5.7
zKNC04-26	zircon	386.6	30.93	181.7	62.8	1.8	196.2	0.35	315.2	4.06	0.75	46.13		384.9	3.6
zKNC04-27	zircon	807.8	64.62	63.2	53.6	3.1	75.6	0.85	259.5	3.92	0.74	45.64		1614	11

zKNC04-31	zircon	334.9	26.79	152.8	39.0	1.8	161.8	0.26	232.1	5.65	0.77	51.50		1032	11
zKNC04-32	zircon	293.3	23.47	163.7	70.1	2.9	179.8	0.43	222.7	5.28	0.77	49.99		300.7	2.8
zKNC04-33	zircon	297.2	23.77	421.9	49.1	12.7	433.3	0.12	501.1	2.58	0.71	38.23		414.6	6.9
zKNC04-39	zircon	312.5	25.00	196.4	150.0	4.0	230.9	0.76	288.2	3.59	0.72	42.34		376	3.8
zKNC04-41	zircon	265.2	21.21	162.2	26.5	3.3	168.4	0.16	188.5	5.90	0.77	49.55		426.3	5
zKNC04-43	zircon	249.4	19.95	143.7	116.6	11.2	170.6	0.81	172.5	3.59	0.74	44.83		383.5	4.8
zKNC04-48	zircon	437.8	35.03	119.6	40.3	22.4	129.0	0.34	215.6	1.97	0.69	36.09		953	14
zKNC04-53	zircon	440.0	35.20	249.3	50.3	5.4	260.9	0.20	483.3	3.99	0.76	46.94		450.2	4.4
zKNC04-54	zircon	338.2	27.06	68.8	23.6	2.6	74.3	0.34	102.4	3.51	0.74	43.92		1133	16
zKNC04-72	zircon	434.4	34.75	54.5	23.6	1.6	59.9	0.43	105.4	3.24	0.73	42.32		2415.5	9.5
zKNC04-83	zircon	818.9	65.51	236.1	124.8	34.4	265.0	0.53	940.7	4.03	0.75	47.49		1937	14
zKNC04-96	zircon	401.1	32.09	36.6	27.5	10.1	43.0	0.75	70.7	3.75	0.74	44.79		1699	15
zKNC04-98	zircon	439.8	35.18	76.6	53.3	3.8	88.9	0.70	164.2	4.63	0.75	47.80		490.4	6
zKNC04-111	zircon	920.4	73.63	20.6	19.4	4.3	25.1	0.94	97.9	3.53	0.73	44.43		1523	21
zKNC04-116	zircon	265.1	21.21	64.0	31.4	1.9	71.2	0.49	75.6	3.19	0.73	42.60		639	7.2
zKNC04-119	zircon	374.6	29.97	111.1	58.4	3.4	124.6	0.53	187.6	3.29	0.73	42.22		368.2	4.8
zKNC04-122	zircon	418.6	33.48	99.2	496.4	13.1	213.5	5.00	362.1	3.52	0.73	44.83		2738.4	8.9
z13SAN01-1	zircon	117.1	9.37	173.7	43.0	4.0	183.6	0.25	77.7	1.56	0.67	33.24		no datum	no datum
z13SAN01-3	zircon	97.1	7.77	170.2	49.7	2.1	181.6	0.29	67.0	2.24	0.70	37.70		no datum	no datum
z13SAN01-4	zircon	119.5	9.56	142.2	76.5	0.9	159.9	0.54	72.7	2.31	0.70	38.15		no datum	no datum
z13SAN01-6	zircon	109.1	8.72	92.6	45.5	1.6	103.1	0.49	43.4	2.57	0.71	39.66		no datum	no datum
z13SAN03-1	zircon	99.6	7.97	231.1	126.7	6.9	260.3	0.55	99.5	2.71	0.71	39.17		no datum	no datum
z13SAN03-2	zircon	81.7	6.53	131.8	69.5	4.4	147.9	0.53	49.6	4.76	0.76	47.93		no datum	no datum
z13SAN03-3	zircon	103.5	8.28	444.4	287.5	13.5	510.6	0.65	195.8	1.90	0.68	35.86		no datum	no datum
z13SAN03-4	zircon	94.2	7.54	199.6	54.6	3.2	212.2	0.27	78.4	3.24	0.72	41.09		no datum	no datum
z13SAN03-5	zircon	105.6	8.45	254.5	289.6	28.5	321.3	1.14	128.6	2.50	0.69	38.34		no datum	no datum
z13SAN04-1	zircon	99.9	7.99	64.3	56.2	1.2	77.2	0.87	34.4	12.64	0.82	66.63		1036.7	9.4

z13SAN04-9	zircon	102.9	8.23	170.7	170.8	2.0	210.0	1.00	92.6	7.01	0.79	56.28		455.8	4.3
z13SAN04-12	zircon	104.2	8.34	113.5	85.9	1.9	133.3	0.76	56.7	4.97	0.75	47.29		1027	9.9
z13SAN04-22	zircon	105.5	8.44	235.5	188.2	5.2	278.9	0.80	119.4	3.97	0.75	46.33		668.2	5.1
z13SAN04-34	zircon	91.8	7.35	128.1	90.9	1.3	149.1	0.71	58.2	6.22	0.78	54.74		2669.5	6.6
z13SAN04-43	zircon	99.0	7.92	142.8	197.7	1.5	188.3	1.38	79.3	6.56	0.78	55.22		1012	12
z13SAN04-46	zircon	93.1	7.45	147.9	95.8	1.5	170.0	0.65	68.5	7.60	0.80	58.51		1063	7.4
z13SAN04-59	zircon	83.6	6.69	111.3	91.5	1.7	132.3	0.82	44.7	3.95	0.74	45.92		1471	8.3
z13SAN04-62	zircon	91.9	7.35	117.3	98.8	1.3	140.1	0.84	53.6	6.20	0.76	50.65		1428	11
z13SAN04-71	zircon	90.7	7.25	253.1	208.2	2.8	301.0	0.82	111.4	4.27	0.75	47.38		474.5	3.4
z13SAN04-85	zircon	90.7	7.26	178.1	109.9	1.1	203.4	0.62	79.2	7.45	0.79	56.41		1554.9	3.9
z13SAN04-88	zircon	85.7	6.85	99.9	81.3	1.3	118.7	0.81	41.6	4.32	0.75	47.68		1001.2	9.5
z13SAN04-90	zircon	90.5	7.24	364.3	181.5	2.1	406.1	0.50	156.9	6.45	0.79	55.17		451.2	2.3
z13SAN04-115	zircon	84.6	6.77	141.0	90.8	1.2	162.0	0.64	58.8	7.42	0.79	56.47		993	12
z13SAN04-120	zircon	111.3	8.90	738.5	217.9	3.0	788.7	0.30	347.9	3.19	0.73	42.28		2589	10
z13SAN05-1	zircon	102.1	8.16	192.6	71.4	1.0	209.1	0.37	68.0	0.86	0.59	26.27		no datum	no datum
z13SAN05-2	zircon	94.8	7.58	244.2	122.8	0.5	272.5	0.50	88.3	1.18	0.63	30.05		no datum	no datum
z13SAN05-3	zircon	92.2	7.37	610.3	224.7	1.0	662.0	0.37	198.5	0.86	0.60	27.22		no datum	no datum

Table 3a: Canyon Range and Pavant Thrust Sheets: Canyon Mountains

Reduced (U-Th[Sm])/He Data															
Sample	**mineral**	**Age, Ma**	**err., Ma**	**U (ppm)**	**Th (ppm)**	**147Sm (ppm)**	**[U]e**	**Th/U**	**He (nmol/g)**	**mass (ug)**	**Ft**	**ESR**		**Best age**	**error**
z11UOK05-1	zircon	101.9	8.15	12.8	10.2	1.1	15.2	0.80	6.9	10.41	0.81	64.55		1072.0	22.0
z11UOK05-2	zircon	175.6	14.05	66.8	59.0	1.7	80.3	0.88	61.2	7.68	0.79	57.92		1856.8	5.1
z11UOK05-3	zircon	35.1	2.80	103.6	80.2	4.9	122.1	0.77	18.3	7.71	0.79	56.36		2619.2	5.5
z11UOK05-6	zircon	128.8	10.31	58.8	29.9	0.8	65.7	0.51	37.1	8.78	0.80	60.93		1049.1	7.6
z11UOK05-7	zircon	137.3	10.98	42.8	29.6	1.0	49.7	0.69	28.7	5.52	0.77	52.06		1044.8	8.4
z11UOK05-9	zircon	183.4	14.68	68.4	44.1	5.4	78.6	0.64	61.4	6.38	0.78	53.52		1349.0	12.0

z11UOK05-11	zircon	81.2	6.50	132.5	94.3	3.5	154.2	0.71	51.1	4.04	0.75	47.37		1832.6	6.3
z11UOK05-15	zircon	91.7	7.34	53.8	30.9	3.8	60.9	0.57	24.0	7.11	0.79	57.03		2749.0	21.0
z11UOK05-17	zircon	124.9	9.99	126.0	52.6	0.8	138.1	0.42	74.0	6.79	0.79	55.44		949.2	6.4
z11UOK05-21	zircon	106.5	8.52	85.8	43.8	18.5	96.0	0.51	42.0	4.38	0.76	47.83		1077.6	8.1
z11UOK05-24	zircon	146.7	11.73	59.0	34.5	2.8	67.0	0.58	42.7	7.81	0.80	58.32		1365.3	9.8
z11UOK05-34	zircon	133.4	10.67	77.9	65.0	2.9	92.9	0.83	52.5	5.81	0.78	53.31		2009.9	9.2
z11UOK05-41	zircon	46.0	3.68	169.3	73.8	7.7	186.3	0.44	37.2	8.25	0.80	59.74		2696.2	5.3
z11UOK05-42	zircon	104.3	8.34	122.1	52.6	2.5	134.3	0.43	58.5	5.02	0.77	50.47		1166.7	7.8
z11UOK05-43	zircon	190.9	15.27	26.2	15.7	0.9	29.8	0.60	24.4	7.45	0.78	55.27		1472.7	9.6
z11UOK05-44	zircon	98.1	7.85	62.5	25.5	4.3	68.4	0.41	28.1	5.12	0.77	50.84		1109.2	9.1
z11UOK05-46	zircon	167.5	13.40	65.2	47.8	13.1	76.3	0.73	54.9	6.62	0.79	55.61		1451.7	8.7
z11UOK05-47	zircon	250.9	20.08	61.3	31.6	1.0	68.5	0.52	72.5	5.51	0.77	50.54		1026.3	7.9
z11UOK05-50	zircon	313.4	25.08	38.7	28.6	4.4	45.3	0.74	59.7	4.91	0.76	49.46		1660.0	150.0
z11UOK05-51	zircon	63.9	5.12	88.3	58.6	8.0	101.8	0.66	27.6	6.57	0.78	54.35		2666.5	9.0
z11UOK05-53	zircon	105.3	8.42	48.1	35.7	1.1	56.4	0.74	24.4	4.55	0.76	48.38		1444.0	10.0
z11UOK05-62	zircon	305.9	24.47	85.4	38.6	3.3	94.3	0.45	126.3	6.88	0.79	56.95		1766.7	9.5
z11UOK05-78	zircon	117.0	9.36	90.2	35.7	2.5	98.4	0.40	47.3	4.51	0.76	47.66		986.1	9.2
z11UOK05-79	zircon	332.5	26.60	39.9	14.5	0.4	43.3	0.36	64.8	10.09	0.81	63.31		963.7	9.6
z11UOK05-90	zircon	112.7	9.02	71.5	58.1	1.0	84.9	0.81	41.6	7.84	0.80	59.21		2685.9	6.7
z11UOK05-99	zircon	181.9	14.55	54.1	22.5	1.3	59.3	0.42	46.3	6.28	0.78	54.70		1463.0	11.0
z11UOK01-01	zircon	221.7	17.74	28.9	10.7	0.4	31.3	0.37	30.3	7.45	0.79	57.30		1097.0	13.0
z11UOK01-10	zircon	39.7	3.17	64.1	40.5	0.7	73.4	0.63	12.1	5.72	0.76	49.90		1048.0	13.0
z11UOK01-18	zircon	19.7	1.57	102.1	69.9	1.1	118.2	0.69	9.0	2.60	0.71	40.44		1777.0	11.0
z11UOK01-32	zircon	41.0	3.28	172.5	78.3	1.8	190.5	0.45	30.8	3.13	0.73	42.53		1020.0	18.0
z11UOK01-33	zircon	14.6	1.17	65.6	21.6	0.8	70.5	0.33	4.5	8.52	0.80	59.88		1064.0	22.0
z11UOK01-34	zircon	15.8	1.26	117.1	61.6	1.3	131.3	0.53	7.7	1.87	0.69	36.29		2551.0	22.0
z11UOK01-42	zircon	22.0	1.76	98.3	53.9	3.2	110.8	0.55	10.4	6.65	0.79	56.20		2688.0	10.0
z11UOK01-61	zircon	18.4	1.47	232.5	76.1	3.5	250.0	0.33	18.7	4.05	0.75	46.97		1744.0	26.0
z11UOK01-76	zircon	110.9	8.88	98.4	28.2	0.9	104.9	0.29	49.5	6.06	0.78	53.48		1785.0	11.0

z11UOK01-94	zircon	11.3	0.90	277.2	116.6	3.6	304.1	0.42	13.9	4.21	0.75	47.18		1704.0	14.0
z11UOK01-102	zircon	12.8	1.03	76.1	26.4	0.3	82.2	0.35	4.0	2.04	0.69	37.05		1355.0	14.0
z11UOK01-110	zircon	38.5	3.08	177.6	70.6	1.3	193.9	0.40	30.0	3.87	0.74	44.98		1414.0	14.0
z11UOK01-118	zircon	37.0	2.96	97.7	47.0	0.7	108.6	0.48	15.3	2.37	0.70	38.61		1352.0	32.0
z11UOK01-121	zircon	47.3	3.79	82.5	35.2	0.7	90.6	0.43	16.4	2.54	0.71	39.15		1310.0	15.0
z11UPC12-09	zircon	141.1	11.29	136.2	51.9	0.8	148.1	0.38	89.3	6.22	0.78	54.34		1069.6	9.0
z11UPC12-14	zircon	198.4	15.87	72.7	31.1	1.0	79.8	0.43	68.3	6.83	0.79	55.51		945.4	8.1
z11UPC12-15	zircon	108.4	8.67	46.5	33.7	0.5	54.2	0.72	24.0	4.19	0.75	47.12		2706.0	11.0
z11UPC12-16	zircon	207.8	16.62	146.3	38.6	0.7	155.2	0.26	144.4	11.46	0.82	64.54		990.9	7.8
z11UPC12-41	zircon	99.5	7.96	108.6	54.8	0.7	121.3	0.50	51.9	7.36	0.79	56.61		1369.0	13.0
z11UPC12-47	zircon	118.2	9.45	38.3	47.6	2.4	49.3	1.24	24.0	4.59	0.76	49.04		1810.0	12.0
z11UPC12-54	zircon	346.1	27.69	35.3	17.6	0.6	39.3	0.50	59.8	7.70	0.79	57.26		1383.0	18.0
z11UPC12-58	zircon	119.6	9.57	84.9	22.8	0.7	90.1	0.27	49.3	16.10	0.84	74.80		1857.0	10.0
z11UPC12-63	zircon	148.5	11.88	120.9	50.2	0.7	132.4	0.42	81.7	4.39	0.76	48.86		1440.1	6.8
z11UPC12-79	zircon	127.6	10.21	51.1	60.0	1.1	64.9	1.18	32.7	2.92	0.72	42.79		2774.0	12.0
z11UPC12-85	zircon	82.0	6.56	155.8	82.4	1.0	174.7	0.53	64.6	13.10	0.83	70.28		1941.0	17.0
z11UPC12-88	zircon	172.9	13.83	37.8	14.2	0.5	41.0	0.38	30.8	7.42	0.79	57.50		1701.0	13.0
z11UPC12-96	zircon	166.0	13.28	37.6	17.6	0.5	41.7	0.47	29.9	6.87	0.79	56.83		1731.0	11.0
z11UPC12-117	zircon	128.1	10.25	89.6	46.7	0.8	100.4	0.52	55.4	7.21	0.79	56.48		1068.0	12.0
z11UPC04-02	zircon	281.7	22.54	213.9	85.3	2.2	233.6	0.40	273.9	4.64	0.76	47.68		1698.5	5.6
z11UPC04-10	zircon	96.7	7.74	268.4	87.9	2.9	288.6	0.33	112.2	3.44	0.74	44.32		1334.9	6.1
z11UPC04-13	zircon	135.1	10.81	76.8	32.8	0.5	84.4	0.43	48.5	6.30	0.78	53.74		1059.0	11.0
z11UPC04-15	zircon	154.7	12.37	136.5	50.3	1.0	148.1	0.37	94.4	4.10	0.76	47.56		999.8	6.9
z11UPC04-17	zircon	187.8	15.02	42.7	41.0	0.7	52.2	0.96	41.1	4.93	0.77	50.94		1431.0	15.0
z11UPC04-21	zircon	219.1	17.53	100.5	50.4	1.1	112.1	0.50	98.4	3.42	0.73	43.07		1062.3	7.6
z11UPC04-25	zircon	750.0	60.00	70.7	32.5	4.0	78.2	0.46	286.0	18.15	0.85	77.81		1648.3	9.2
z11UPC04-27	zircon	167.3	13.38	56.8	45.7	0.5	67.4	0.80	46.0	4.37	0.75	46.73		2613.6	7.4
z11UPC04-33	zircon	195.4	15.63	45.4	38.9	1.2	54.4	0.86	46.6	8.21	0.80	60.18		1362.0	15.0

z11UPC04-38	zircon	144.1	11.53	66.9	45.7	0.6	77.4	0.68	47.3	5.92	0.78	53.08	1059.0	10.0
z11UPC04-51	zircon	323.7	25.90	43.5	19.5	5.8	48.0	0.45	65.0	4.85	0.76	48.03	1695.0	16.0
z11UPC04-57	zircon	258.3	20.66	110.5	40.1	2.0	119.7	0.36	127.4	3.80	0.75	46.32	1405.0	11.0
z11UPC04-58	zircon	327.1	26.17	166.7	73.7	0.7	183.6	0.44	257.2	5.53	0.77	52.10	2573.1	7.1
z11UPC04-75	zircon	178.2	14.26	18.1	15.6	0.2	21.7	0.86	17.4	13.55	0.82	67.83	2641.0	11.0
z11UPC04-90	zircon	107.0	8.56	135.2	96.4	0.9	157.4	0.71	75.2	11.10	0.82	66.73	1618.7	8.6
z11UPC04-95	zircon	219.0	17.52	39.4	44.3	1.4	49.6	1.12	48.4	10.47	0.81	64.40	1659.0	13.0
z11UPC04-108	zircon	316.2	25.29	92.1	37.2	2.6	100.7	0.40	143.6	10.16	0.82	64.35	1694.5	6.6
z11UPC03-01	zircon	530.4	42.44	146.2	134.4	9.1	177.2	0.92	370.1	2.80	0.70	39.35	1358.4	8.7
z11UPC03-11	zircon	204.2	16.33	183.6	147.6	3.7	217.6	0.80	172.3	2.57	0.71	39.86	1440.3	7.3
z11UPC03-13	zircon	689.6	55.17	77.2	89.1	2.1	97.7	1.15	271.4	3.19	0.71	40.83	1358.0	11.0
z11UPC03-20	zircon	447.6	35.80	241.8	104.3	6.6	265.9	0.43	453.4	2.07	0.69	36.08	1677.0	11.0
z11UPC03-26	zircon	152.4	12.19	40.3	45.6	1.6	50.8	1.13	32.1	4.56	0.76	49.68	2841.3	9.8
z11UPC03-34	zircon	94.4	7.55	203.0	148.1	3.9	237.1	0.73	83.7	2.18	0.69	36.91	1373.8	8.2
z11UPC03-77	zircon	542.2	43.38	102.8	98.4	4.4	125.5	0.96	273.4	2.96	0.72	41.48	1095.9	9.9
z11UPC03-84	zircon	451.4	36.11	43.2	45.6	2.3	53.7	1.06	105.2	7.11	0.78	53.86	1096.0	14.0
z11UPC03-90	zircon	210.7	16.86	152.4	124.9	3.0	181.2	0.82	159.8	4.96	0.76	50.15	1757.3	6.2
z11UPC03-91	zircon	274.3	21.94	43.6	50.3	1.1	55.2	1.15	58.0	2.26	0.70	38.56	2647.4	5.6
z11UPC03-92	zircon	240.1	19.21	74.8	36.9	2.9	83.3	0.49	83.7	5.11	0.76	49.40	1083.0	11.0
z11UPC03-93	zircon	255.0	20.40	103.9	80.3	2.1	122.4	0.77	121.6	2.44	0.71	40.02	1662.2	7.7
z11UPC03-98	zircon	657.8	52.62	72.3	103.6	5.2	96.2	1.43	234.2	1.78	0.66	33.90	1357.0	10.0
z11UPC03-99	zircon	283.8	22.70	144.7	73.5	3.6	161.6	0.51	190.4	4.33	0.75	47.49	1061.0	11.0
z11UPC03-100	zircon	404.6	32.37	113.8	36.3	1.8	122.2	0.32	179.7	1.36	0.66	32.44	1745.0	10.0
z11UPC03-102	zircon	472.7	37.81	131.5	64.1	2.8	146.2	0.49	282.5	3.46	0.73	43.34	1670.0	12.0
z11UPC03-107	zircon	411.1	32.88	168.5	61.2	2.2	182.6	0.36	278.1	1.70	0.67	33.87	1836.8	9.1
z11UPC03-108	zircon	242.6	19.41	116.7	48.9	2.7	127.9	0.42	123.3	2.95	0.72	41.73	1639.0	11.0
z11UPC03-121	zircon	350.2	28.01	328.1	163.0	3.7	365.7	0.50	518.2	4.09	0.73	43.25	1775.3	8.2
z11UPC02-03	zircon	294.1	23.52	95.5	45.3	1.1	105.9	0.47	129.8	4.64	0.76	47.90	1761.0	7.9

z11UPC02-07	zircon	178.1	14.25	51.7	42.6	4.4	61.5	0.82	46.7	6.08	0.78	53.87		1056.0	10.0
z11UPC02-44	zircon	109.3	8.74	45.5	38.2	1.2	54.3	0.84	24.6	4.55	0.76	49.40		1754.9	5.5
z11UPC02-49	zircon	119.9	9.59	191.3	111.6	3.4	217.0	0.58	105.7	3.86	0.75	46.16		1435.9	7.5
z11UPC02-53	zircon	106.4	8.51	95.6	67.3	2.9	111.1	0.70	46.3	2.99	0.72	41.57		492.5	6.1
z11UPC02-60	zircon	38.3	3.06	234.5	108.6	1.3	259.5	0.46	39.3	3.21	0.73	43.14		2783.9	5.9
z11UPC02-63	zircon	45.9	3.67	302.1	120.2	1.0	329.8	0.40	63.9	6.21	0.78	53.34		2671.0	16.0
z11UPC02-75	zircon	280.4	22.43	66.1	43.1	1.0	76.1	0.65	90.2	5.21	0.77	51.00		1062.7	9.6
z11UPC02-90	zircon	118.8	9.51	117.4	57.6	0.9	130.6	0.49	65.3	5.24	0.77	51.81		1054.0	12.0
z11UPC02-102	zircon	145.0	11.60	179.7	85.1	0.9	199.2	0.47	115.2	3.09	0.73	43.09		1779.2	6.8
z11UPC02-103	zircon	96.5	7.72	314.6	304.0	4.2	384.6	0.97	139.4	2.22	0.69	37.45		507.7	5.4
z11UPC02-111	zircon	167.3	13.38	139.0	114.6	1.6	165.4	0.82	110.0	3.45	0.73	43.03		1432.5	9.9
z11UPC02-112	zircon	266.6	21.33	157.0	85.3	1.3	176.7	0.54	196.8	5.10	0.76	48.75		1420.0	10.0
z11UPC02-116	zircon	115.0	9.20	23.5	30.9	1.0	30.6	1.32	14.7	5.41	0.76	51.01		1081.0	12.0
z11UPC02-117	zircon	254.2	20.33	112.2	93.5	1.3	133.7	0.83	137.1	3.41	0.73	44.18		1758.0	7.4
z11UOK04-116	zircon	94.7	7.58	118.7	138.7	14.3	150.7	1.17	55.2	3.09	0.71	40.49		1461.0	13.0
z11UOK04-117	zircon	143.9	11.51	74.4	94.7	52.1	96.4	1.27	58.6	5.94	0.77	52.59		1446.0	12.0
z11UOK04-16	zircon	93.6	7.48	55.3	43.4	6.4	65.3	0.79	24.7	4.17	0.74	46.03		1439.0	17.0
z11UOK04-19	zircon	107.0	8.56	193.1	119.0	26.9	220.6	0.62	90.3	2.33	0.70	38.90		1436.5	9.5
z11UOK04-39	zircon	101.3	8.10	22.6	22.5	2.2	27.8	1.00	11.7	5.57	0.77	50.98		1529.0	85.0
z11UOK04-88	zircon	216.5	17.32	120.0	103.1	7.7	143.8	0.86	125.2	4.16	0.73	44.12		1444.0	15.0
z11UOK04-95	zircon	105.6	8.45	102.2	81.8	8.7	121.1	0.80	50.7	3.06	0.73	43.07		1459.0	16.0
z11UOK04-96	zircon	70.3	5.63	215.8	117.0	59.9	243.0	0.54	68.5	3.66	0.74	44.41		1450.0	16.0
z11UOK07-03	zircon	189.0	15.12	29.5	18.2	6.7	33.8	0.62	26.4	4.75	0.75	47.93		1140.0	17.0
z11UOK07-10	zircon	153.0	12.24	77.8	46.9	6.1	88.6	0.60	60.7	12.09	0.82	66.58		1080.0	11.0
z11UOK07-103	zircon	20.3	1.62	363.3	26.9	2.4	369.5	0.07	32.8	9.72	0.81	61.23		2660.0	5.0
z11UOK07-114	zircon	18.6	1.49	344.4	26.7	3.9	350.5	0.08	27.4	5.24	0.78	51.24		2663.0	10.0
z11UOK07-118	zircon	51.8	4.14	310.1	60.9	8.1	324.1	0.20	71.7	7.16	0.79	54.93		1885.0	15.0

z11UOK07-14	zircon	168.9	13.51	46.2	17.9	1.7	50.3	0.39	34.8	4.15	0.75	46.33		2692.0	10.0
z11UOK07-15	zircon	249.9	20.00	144.0	69.6	6.9	160.1	0.48	176.4	8.38	0.80	59.82		2841.8	9.1
z11UOK07-30	zircon	125.2	10.02	175.2	102.0	5.4	198.7	0.58	96.3	2.45	0.71	39.92		2665.0	12.0
z11UOK07-32	zircon	106.6	8.53	162.4	102.3	6.1	186.0	0.63	82.9	5.05	0.77	50.91		1052.0	12.0
z11UOK07-39	zircon	192.1	15.36	132.6	61.3	5.9	146.7	0.46	127.8	13.05	0.83	69.43		1082.9	8.9
z11UOK07-41	zircon	166.6	13.33	112.7	72.5	7.3	129.4	0.64	94.6	9.62	0.80	60.38		1099.0	11.0
z11UOK07-66	zircon	193.1	15.45	423.1	132.5	15.2	453.7	0.31	327.9	2.57	0.69	35.77		1049.1	6.8
z11UOK07-97	zircon	177.9	14.23	93.9	31.7	3.8	101.2	0.34	77.7	6.76	0.79	55.84		1067.0	11.0
z11UPC01-05	zircon	60.8	4.87	314.6	92.8	13.1	336.0	0.29	84.4	4.62	0.76	48.79		1815.0	8.6
z11UPC01-110	zircon	58.3	4.67	241.1	62.6	2.2	255.6	0.26	54.2	1.85	0.67	33.99		1777.4	6.8
z11UPC01-50	zircon	30.9	2.47	379.8	49.9	1.4	391.3	0.13	43.7	1.47	0.67	33.50		1767.1	8.6
z11UPC01-51	zircon	62.6	5.01	462.1	172.2	12.5	501.8	0.37	122.2	2.54	0.72	40.54		1785.0	12.0
z11UPC01-73	zircon	27.2	2.18	627.5	251.8	11.0	685.5	0.40	74.0	3.18	0.73	43.16		1782.2	8.6
z11UPC01-74	zircon	64.1	5.13	246.4	72.4	6.0	263.1	0.29	66.5	2.89	0.73	42.10		1780.5	7.8
z11UPC01-95	zircon	98.2	7.85	245.9	88.3	6.0	266.3	0.36	115.4	9.59	0.81	63.06		1793.4	5.4
z11UPC13-01	zircon	133.1	10.65	15.7	15.1	6.1	19.2	0.97	11.5	13.72	0.82	69.31		1102.0	13.0
z11UPC13-06	zircon	116.0	9.28	237.5	88.0	10.8	257.8	0.37	122.4	4.20	0.75	46.72		1083.6	9.0
z11UPC13-32	zircon	47.7	3.82	252.2	94.9	37.7	274.2	0.38	53.6	4.57	0.76	47.73		1084.9	8.6
z11UPC13-48	zircon	269.2	21.54	28.3	11.6	2.6	31.0	0.41	34.9	5.58	0.76	48.88		1169.0	20.0
z11UPC13-65	zircon	162.3	12.98	136.2	74.8	17.0	153.5	0.55	102.6	4.47	0.75	47.64		1091.2	8.2
z11UPC13-71	zircon	126.5	10.12	112.8	71.7	8.5	129.4	0.64	64.5	3.40	0.72	42.04		1026.6	9.4

Table 3a: Canyon Range Conglomerate: Canyon Mountains

Reduced (U-Th[Sm])/He Data															
Sample	**mineral**	**Age, Ma**	**err., Ma**	**U (ppm)**	**Th (ppm)**	**147Sm (ppm)**	**[U]e**	**Th/U**	**He (nmol/g)**	**mass (ug)**	**Ft**	**ESR**		**Best age**	**error**

z11UPC11-1	zircon	417.7	33.42	181.0	89.2	4.4	201.5	0.49	307.3	1.49	0.66	33.01		1706	13
z11UPC11-2	zircon	748.7	59.90	130.9	65.4	2.7	146.0	0.50	439.3	2.67	0.71	39.04		1729	16
z11UPC11-3	zircon	382.0	30.56	69.1	94.2	4.0	90.8	1.36	107.8	0.62	0.56	25.47		2079	20
z11UPC11-4	zircon	289.8	23.19	76.9	41.6	1.0	86.5	0.54	92.3	1.96	0.67	34.30		1040	22
z11UPC11-5	zircon	375.1	30.01	201.7	86.6	1.9	221.6	0.43	319.8	2.12	0.70	37.38		1463	10
z11UPC11-11	zircon	205.2	16.42	88.4	31.2	1.5	95.6	0.35	67.4	1.13	0.63	29.69		1000	16
z11UPC11-16	zircon	513.3	41.06	82.9	47.7	4.6	93.9	0.58	192.7	2.87	0.71	40.57		1025	16
z11UPC11-17	zircon	235.8	18.86	350.7	217.2	2.4	400.7	0.62	338.1	1.59	0.65	32.60		440.7	8
z11UPC11-21	zircon	417.1	33.37	324.3	147.7	6.1	358.4	0.46	501.8	0.95	0.61	27.99		1448	16
z11UPC11-33	zircon	274.9	22.00	257.4	66.6	1.4	272.7	0.26	269.2	1.37	0.65	32.05		1475	18
z11UPC11-37	zircon	472.7	37.82	143.4	118.3	8.6	170.7	0.82	298.9	1.63	0.67	34.26		1706	18
z11UPC11-38	zircon	869.9	69.59	157.8	80.1	2.4	176.3	0.51	649.4	3.67	0.73	43.70		2065	20
z11UPC11-63	zircon	469.9	37.59	87.8	39.5	2.4	96.9	0.45	161.0	1.13	0.64	30.65		2095	19
z11UPC11-70	zircon	862.6	69.01	82.0	26.6	1.0	88.1	0.32	288.2	1.36	0.66	33.04		1777	16
z11UPC11-72	zircon	229.7	18.37	284.8	56.2	1.4	297.7	0.20	255.1	1.95	0.68	35.05		461	11
z11UPC11-81	zircon	626.6	50.13	54.6	50.4	2.2	66.2	0.92	153.6	1.50	0.66	33.60		2319	11
z11UPC11-101	zircon	225.1	18.01	41.0	42.4	2.4	50.8	1.04	42.4	1.84	0.68	35.72		1005	16
z11UPC11-104	zircon	754.6	60.36	74.5	34.9	1.0	82.5	0.47	246.7	2.00	0.70	37.56		2446	16
z11UPC11-108	zircon	272.7	21.82	142.2	115.9	1.2	168.9	0.81	166.2	1.56	0.66	33.24		436.1	8.2
z11UPC10-2	zircon	380.2	30.41	167.0	71.4	2.3	183.5	0.43	301.3	5.98	0.78	52.95		1657.9	6.3
z11UPC10-3	zircon	602.4	48.19	120.2	79.5	1.9	138.5	0.66	364.0	5.60	0.77	52.07		2695.7	8
z11UPC10-4	zircon	448.3	35.86	163.2	39.2	1.9	172.3	0.24	335.7	5.43	0.78	52.48		1437	8.5
z11UPC10-5	zircon	143.2	11.46	109.2	65.9	3.8	124.4	0.60	74.6	5.23	0.77	50.76		1748.4	6
z11UPC10-6	zircon	712.1	56.97	57.7	17.1	0.9	61.7	0.30	197.3	6.10	0.79	54.41		1846.2	6.1
z11UPC10-8	zircon	636.2	50.90	29.6	29.4	0.6	36.4	0.99	105.4	8.99	0.80	61.26		1852.8	8.3
z11UPC10-9	zircon	440.2	35.22	232.3	150.4	3.3	267.0	0.65	472.0	2.80	0.72	41.81		1435.3	7.3
z11UPC10-11	zircon	121.4	9.71	177.9	67.6	3.5	193.4	0.38	94.5	3.48	0.74	44.36		838	13
z11UPC10-17	zircon	133.8	10.71	171.6	94.6	7.0	193.4	0.55	101.6	2.94	0.72	41.40		1454	10
z11UPC10-18	zircon	923.5	73.88	25.3	12.9	0.8	28.2	0.51	123.1	10.03	0.81	61.82		1506	38

z11UPC10-27	zircon	669.3	53.54	68.7	39.1	1.1	77.7	0.57	233.6	6.99	0.79	56.32	1376	11
z11UPC10-28	zircon	254.6	20.37	110.0	83.6	2.5	129.2	0.76	134.5	3.91	0.74	45.86	1770.7	9.5
z11UPC10-29	zircon	178.3	14.26	189.9	56.6	1.3	202.9	0.30	136.5	1.88	0.69	36.57	1162.3	9.8
z11UPC10-30	zircon	169.9	13.59	236.5	62.7	2.1	251.0	0.27	165.9	2.74	0.71	39.57	463.3	5.1
z11UPC10-31	zircon	920.9	73.67	68.7	42.8	0.4	78.5	0.62	337.2	7.83	0.80	59.44	1445.3	9.1
z11UPC10-36	zircon	254.9	20.39	23.2	30.6	0.9	30.2	1.32	34.2	9.73	0.80	62.34	2661.8	8.1
z11UPC10-44	zircon	205.9	16.47	88.3	36.4	1.0	96.7	0.41	77.2	2.33	0.71	39.25	1160.4	9
z11UPC10-52	zircon	221.0	17.68	84.6	69.5	2.7	100.6	0.82	83.7	2.16	0.69	36.90	2675.1	6.5
z11UPC10-55	zircon	202.1	16.17	83.4	92.4	1.4	104.7	1.11	89.3	5.42	0.77	52.06	1424	31
z11UPC10-60	zircon	307.2	24.58	219.0	47.8	1.5	230.0	0.22	274.4	2.43	0.71	38.28	407.6	4
z11UPC10-71	zircon	423.9	33.91	84.2	86.6	0.9	104.2	1.03	185.7	4.44	0.76	48.83	2695.5	6.9
z11UPC10-75	zircon	225.4	18.03	193.2	78.3	1.6	211.3	0.41	183.5	2.53	0.70	38.47	1166	20
z11UPC10-83	zircon	100.6	8.04	282.5	79.6	0.7	300.8	0.28	137.9	17.00	0.84	73.60	1090.6	8.3
z11UPC10-91	zircon	324.2	25.94	110.3	50.0	4.4	121.8	0.45	166.5	4.82	0.76	49.44	1702	11
z11UPC10-94	zircon	151.1	12.09	332.2	43.6	1.9	342.3	0.13	200.2	2.58	0.71	38.80	438	15
z11UPC10-98	zircon	171.8	13.74	58.8	31.1	0.7	66.0	0.53	44.7	2.77	0.72	41.71	960	10
z11UPC10-99	zircon	279.8	22.39	50.3	49.5	2.3	61.7	0.98	66.9	2.48	0.70	39.48	1895.3	8.6
z11UPC10-102	zircon	144.6	11.56	55.9	39.3	0.8	65.0	0.70	39.3	5.06	0.77	50.82	1824.6	8
z11UPC10-103	zircon	189.3	15.14	45.4	21.6	0.9	50.4	0.48	41.1	6.46	0.79	55.43	2183	21
z11UPC10-109	zircon	392.3	31.39	114.6	64.8	1.7	129.5	0.57	199.5	3.32	0.71	39.51	1429	20
z11UPC10-116	zircon	242.4	19.39	57.5	60.0	1.9	71.3	1.04	70.3	3.85	0.74	45.53	1827	70
z11UPC09-1	zircon	180.4	14.43	93.9	45.4	2.0	104.4	0.48	85.4	16.24	0.83	69.98	1082.8	8.2
z11UPC09-5	zircon	141.9	11.36	65.3	25.3	3.8	71.2	0.39	46.9	19.36	0.85	80.37	1733.6	7.8
z11UPC09-7	zircon	179.0	14.32	78.4	41.6	1.5	88.0	0.53	71.0	13.49	0.82	68.10	1083	15
z11UPC09-9	zircon	146.4	11.71	69.9	34.0	1.4	77.8	0.49	52.3	18.44	0.84	75.45	1050.8	7.3
z11UPC09-10	zircon	111.1	8.89	63.1	20.7	1.0	67.9	0.33	33.4	10.26	0.81	63.58	1053.3	5.6
z11UPC09-12	zircon	165.3	13.22	141.6	59.1	1.6	155.2	0.42	112.0	7.74	0.80	58.97	1084.2	7
z11UPC09-18	zircon	144.1	11.52	161.3	65.7	1.0	176.5	0.41	111.5	8.78	0.80	60.49	1767.3	6.6
z11UPC09-19	zircon	96.6	7.73	312.6	120.1	1.5	340.3	0.38	148.5	13.65	0.83	70.71	1901.4	6.5

z11UPC09-20	zircon	127.9	10.23	45.3	35.8	7.1	53.5	0.79	31.5	19.49	0.84	78.01		1022	11
z11UPC09-21	zircon	130.9	10.47	80.5	30.7	0.9	87.6	0.38	52.5	16.19	0.84	74.96		1083.2	6.8
z11UPC09-25	zircon	189.8	15.18	43.8	27.4	1.2	50.1	0.63	42.4	10.68	0.81	64.43		1685	15
z11UPC09-27	zircon	158.4	12.67	33.7	28.7	1.9	40.4	0.85	28.7	11.57	0.82	67.35		882	21
z11UPC09-28	zircon	196.4	15.71	195.7	52.6	2.3	207.8	0.27	180.9	9.41	0.81	61.79		1707	8.7
z11UPC09-31	zircon	139.4	11.15	52.8	50.9	0.9	64.6	0.96	41.2	16.25	0.84	75.83		972	8
z11UPC09-38	zircon	210.1	16.81	45.0	25.5	0.7	50.9	0.57	46.6	7.81	0.79	57.95		979	10
z11UPC09-39	zircon	160.7	12.86	41.4	24.3	0.9	47.0	0.59	32.8	7.25	0.79	57.88		993	13
z11UPC09-51	zircon	62.3	4.98	414.8	140.1	2.3	447.1	0.34	119.1	6.60	0.79	55.54		2909.4	6.7
z11UPC09-56	zircon	153.2	12.25	108.0	99.2	1.8	130.8	0.92	85.5	6.71	0.78	54.63		1645.2	8.9
z11UPC09-68	zircon	148.8	11.91	236.2	85.5	1.1	255.9	0.36	163.1	6.34	0.79	54.62		1771.6	7.5
z11UPC09-78	zircon	175.1	14.01	83.8	75.8	3.1	101.3	0.90	70.2	3.38	0.72	42.48		507	9
z11UPC09-79	zircon	179.1	14.33	83.7	57.2	1.3	96.8	0.68	72.5	5.25	0.76	50.09		1435.2	8.9
z11UPC09-84	zircon	143.0	11.44	97.5	52.5	0.9	109.6	0.54	64.8	4.31	0.76	48.44		1767.4	8
z11UPC09-90	zircon	197.2	15.77	100.4	57.6	0.8	113.6	0.57	91.1	3.62	0.74	45.39		1660	11
z11UPC09-97	zircon	169.3	13.54	118.0	62.2	4.1	132.3	0.53	94.5	5.94	0.77	51.66		1392	13
z11UPC09-101	zircon	108.4	8.67	247.4	161.3	4.2	284.5	0.65	133.4	7.49	0.79	58.05		1431	7.9
z11UPC09-103	zircon	188.3	15.06	206.1	92.0	1.8	227.3	0.45	180.2	5.33	0.77	50.94		2671.7	6
z11UPC09-112	zircon	275.1	22.01	33.8	34.8	1.3	41.9	1.03	51.8	12.21	0.82	66.05		1752.5	8.4
z11UPC09-113	zircon	215.8	17.26	21.4	18.7	0.6	25.7	0.87	25.2	13.51	0.83	70.84		1741.2	8.9
z11UPC09-116	zircon	252.2	20.17	54.0	30.1	1.1	60.9	0.56	68.4	10.18	0.81	62.70		917	32
z11UPC09-121	zircon	328.9	26.32	40.7	29.2	0.7	47.4	0.72	72.1	14.92	0.83	73.12		1669	11
z11UPC08-8	zircon	101.0	8.08	444.8	142.9	3.2	477.7	0.32	196.9	4.03	0.75	46.40		1899	13
z11UPC08-9	zircon	144.6	11.57	184.5	93.8	5.4	206.2	0.51	122.0	3.91	0.75	46.83		1704	13
z11UPC08-11	zircon	171.1	13.69	92.8	57.8	3.9	106.1	0.62	72.0	2.91	0.73	42.48		1082.5	9.4
z11UPC08-13	zircon	213.9	17.11	134.2	60.8	2.8	148.2	0.45	139.8	9.02	0.80	60.62		1077.5	8.7
z11UPC08-16	zircon	178.4	14.27	125.1	81.8	0.8	143.9	0.65	110.8	6.74	0.79	56.30		1442.9	8.6
z11UPC08-17	zircon	71.9	5.75	635.5	111.4	3.7	661.1	0.18	186.5	2.98	0.72	41.03		1677.7	7.8
z11UPC08-20	zircon	96.7	7.74	106.6	43.2	1.1	116.6	0.41	48.9	8.15	0.80	58.59		1446	11

z11UPC08-23	zircon	205.7	16.45	251.2	78.5	1.7	269.2	0.31	234.9	5.45	0.77	51.75		1715.7	8.9
z11UPC08-32	zircon	81.4	6.52	383.7	234.4	7.3	437.7	0.61	153.9	7.80	0.79	58.08		1820.7	7.8
z11UPC08-34	zircon	140.7	11.26	235.7	117.2	3.8	262.7	0.50	163.2	9.64	0.81	62.45		1460.6	9.1
z11UPC08-39	zircon	171.0	13.68	147.8	57.1	1.2	161.0	0.39	127.4	20.75	0.85	77.94		1109	12
z11UPC08-46	zircon	434.0	34.72	97.2	74.9	2.6	114.5	0.77	227.0	11.42	0.82	66.45		2670	11
z11UPC08-48	zircon	323.4	25.87	122.0	74.8	2.0	139.2	0.61	175.7	2.60	0.71	39.47		1089	13
z11UPC08-57	zircon	136.7	10.93	104.0	40.9	2.0	113.4	0.39	68.1	8.64	0.81	60.91		663.7	9.3
z11UPC08-58	zircon	195.8	15.67	95.9	61.4	1.6	110.1	0.64	84.5	2.60	0.72	40.86		1836.9	6.8
z11UPC08-59	zircon	181.1	14.48	92.9	88.0	2.9	113.2	0.95	82.9	3.74	0.74	45.36		1678.9	9.3
z11UPC08-72	zircon	196.5	15.72	98.1	43.6	0.7	108.2	0.44	94.5	9.38	0.81	63.12		1080.8	9.1
z11UPC08-77	zircon	173.8	13.91	103.6	57.9	1.7	116.9	0.56	77.5	2.44	0.70	38.07		1519	16
z11UPC08-94	zircon	374.4	29.95	64.0	29.4	0.9	70.8	0.46	117.7	7.87	0.80	59.33		1042	13
z11UPC08-117	zircon	177.7	14.22	144.7	61.8	6.0	159.0	0.43	121.4	6.18	0.79	54.90		1725	18
z11UPC08-122	zircon	218.8	17.51	36.1	24.9	0.7	41.9	0.69	36.8	3.17	0.73	43.74		2669.2	8.9
z11UPC07-1	zircon	171.5	13.72	146.1	78.9	1.1	164.2	0.54	105.4	2.01	0.69	36.32		1436	12
z11UPC07-5	zircon	230.1	18.41	49.0	42.6	0.8	58.8	0.87	47.3	1.37	0.64	31.35		1001	17
z11UPC07-6	zircon	297.8	23.83	95.2	21.5	0.6	100.2	0.23	110.0	1.47	0.67	33.77		1184	17
z11UPC07-11	zircon	412.9	33.03	271.4	48.7	0.7	282.6	0.18	471.7	3.16	0.73	41.69		1075	14
z11UPC07-14	zircon	342.2	27.38	73.3	29.2	1.3	80.0	0.40	103.0	1.82	0.68	35.54		946	13
z11UPC07-18	zircon	236.5	18.92	42.5	35.6	2.7	50.7	0.84	45.1	2.09	0.69	36.69		513.3	8.3
z11UPC07-23	zircon	919.0	73.52	70.3	73.7	0.7	87.3	1.05	301.1	1.65	0.66	33.33		1670	23
z11UPC07-29	zircon	477.9	38.23	498.8	265.9	7.5	560.1	0.53	1023.7	2.04	0.69	36.41		417.2	6.4
z11UPC07-41	zircon	202.7	16.22	86.1	116.8	1.7	113.0	1.36	78.1	1.17	0.62	30.23		1004	14
z11UPC07-45	zircon	476.4	38.11	59.8	51.7	1.3	71.7	0.86	129.4	1.90	0.68	36.15		1415	14
z11UPC07-48	zircon	336.5	26.92	188.3	56.2	1.2	201.3	0.30	247.1	1.45	0.66	33.00		1467	12
z11UPC07-60	zircon	309.5	24.76	183.7	41.9	0.8	193.3	0.23	224.2	1.67	0.68	35.04		1017	15
z11UPC07-66	zircon	418.9	33.51	66.8	33.5	0.5	74.5	0.50	132.0	4.69	0.76	48.84		1936	14
z11UPC07-67	zircon	219.5	17.56	114.7	42.2	1.4	124.4	0.37	97.6	1.42	0.65	32.21		2555	12
z11UPC07-71	zircon	350.8	28.06	114.7	103.5	1.8	138.6	0.90	190.8	2.82	0.71	40.28		2097	10

z11UPC07-81	zircon	456.0	36.48	71.8	21.8	0.5	76.8	0.30	132.5	1.74	0.68	35.18	1142	18
z11UPC07-87	zircon	593.0	47.44	81.0	37.2	0.6	89.6	0.46	204.0	1.75	0.68	35.93	550	8.7
z11UPC07-92	zircon	530.8	42.47	148.3	42.5	1.5	158.1	0.29	294.4	1.13	0.63	29.63	450.9	7
z11UPC07-116	zircon	193.2	15.45	113.0	91.9	1.5	134.2	0.81	89.1	1.29	0.63	30.36	1659	19
z11UPC07-120	zircon	173.5	13.88	134.9	53.8	2.1	147.2	0.40	96.9	2.11	0.70	37.31	1745	14
z11UPC06-2	zircon	272.6	21.81	262.3	69.6	1.2	278.3	0.27	295.6	2.38	0.71	39.00	1083	14
z11UPC06-4	zircon	637.5	51.00	38.2	22.0	1.2	43.3	0.58	116.2	4.06	0.74	45.84	1683	12
z11UPC06-9	zircon	567.5	45.40	39.5	22.9	1.1	44.8	0.58	101.3	2.51	0.71	39.87	1658	11
z11UPC06-14	zircon	1075.1	86.00	53.0	59.2	1.5	66.6	1.12	307.5	3.41	0.73	44.51	2712.3	9
z11UPC06-19	zircon	663.9	53.11	83.2	43.3	0.4	93.2	0.52	247.2	2.40	0.71	39.19	2700.7	7.4
z11UPC06-21	zircon	853.9	68.32	70.5	107.9	1.9	95.3	1.53	359.3	5.35	0.77	52.08	2065	10
z11UPC06-24	zircon	858.2	68.65	101.2	110.3	0.6	126.5	1.09	439.3	2.49	0.71	39.91	1952	15
z11UPC06-27	zircon	1016.5	81.32	62.8	46.2	1.5	73.5	0.74	303.9	2.26	0.70	38.60	1918	11
z11UPC06-29	zircon	605.3	48.43	12.6	12.3	0.6	15.5	0.97	38.3	3.07	0.73	43.18	1081	15
z11UPC06-31	zircon	731.8	58.55	79.4	34.4	0.9	87.4	0.43	255.1	2.13	0.70	38.32	1474.3	8.6
z11UPC06-35	zircon	549.8	43.98	52.2	36.6	0.9	60.6	0.70	143.1	4.87	0.76	50.10	2699.4	7.8
z11UPC06-38	zircon	725.4	58.03	28.1	26.3	1.2	34.2	0.93	108.2	5.72	0.77	51.01	1703	12
z11UPC06-44	zircon	723.0	57.84	102.1	99.9	0.6	125.1	0.98	373.9	3.20	0.73	43.30	1918.6	8.6
z11UPC06-60	zircon	763.7	61.10	184.5	80.4	2.7	203.1	0.44	657.5	4.08	0.74	44.82	1448	11
z11UPC06-61	zircon	373.2	29.86	139.2	34.8	0.9	147.2	0.25	226.8	3.67	0.75	45.05	1035	16
z11UPC06-64	zircon	827.8	66.23	83.9	48.4	1.8	95.0	0.58	321.0	2.70	0.71	40.11	1439	13
z11UPC06-89	zircon	193.0	15.44	137.2	62.8	1.5	151.6	0.46	123.0	6.12	0.77	50.67	1060	15
z11UPC06-115	zircon	449.2	35.94	256.2	177.3	3.2	297.0	0.69	520.0	2.14	0.70	38.61	1447.9	9.9
z11UPC06-118	zircon	894.8	71.58	67.6	50.8	0.8	79.2	0.75	289.6	2.49	0.71	40.02	2082.1	7.3
z11UPC06-119	zircon	758.3	60.67	68.3	23.2	0.9	73.7	0.34	242.9	4.23	0.76	48.16	1698	11
z11UPC05-1	zircon	135.4	10.83	140.0	78.5	3.0	158.0	0.56	98.1	16.78	0.84	75.32	1094	13
z11UPC05-3	zircon	94.1	7.53	26.5	33.2	0.8	34.1	1.25	14.0	9.03	0.80	60.30	1111.0	11.0
z11UPC05-5	zircon	123.4	9.87	90.6	41.5	1.0	100.2	0.46	53.4	7.08	0.79	57.00	1028.8	7.4

z11UPC05-6	zircon	334.1	26.73	46.6	46.3	0.7	57.3	0.99	88.8	15.86	0.84	75.10		1901	9.4
z11UPC05-9	zircon	135.7	10.86	123.9	53.4	0.9	136.2	0.43	78.9	6.05	0.78	54.22		1405.4	8.3
z11UPC05-10	zircon	476.7	38.14	133.4	77.8	1.3	151.4	0.58	317.9	7.29	0.79	55.79		1435.8	7.7
z11UPC05-12	zircon	872.6	69.81	84.2	27.3	0.6	90.5	0.32	360.5	6.24	0.79	54.57		1829	13
z11UPC05-14	zircon	97.8	7.82	39.3	26.4	1.1	45.4	0.67	19.5	10.51	0.81	62.81		1097.0	10
z11UPC05-16	zircon	119.6	9.57	159.5	78.7	3.6	177.7	0.49	94.1	10.34	0.81	63.73		1725	13
z11UPC05-18	zircon	120.3	9.63	83.3	80.1	0.9	101.8	0.96	49.5	3.86	0.74	45.61		2694.2	7.5
z11UPC05-24	zircon	460.9	36.87	42.7	34.0	1.0	50.6	0.80	104.8	9.61	0.80	61.26		1382	15
z11UPC05-29	zircon	122.9	9.83	77.1	60.8	4.9	91.2	0.79	44.3	3.18	0.73	42.80		1441	16
z11UPC05-33	zircon	93.1	7.44	51.6	15.3	0.7	55.1	0.30	23.2	14.42	0.83	71.22		1069	14
z11UPC05-45	zircon	159.2	12.74	202.2	70.2	1.1	218.3	0.35	144.2	4.47	0.76	48.37		1919	11
z11UPC05-49	zircon	124.1	9.93	154.7	50.3	2.0	166.3	0.33	87.2	5.25	0.78	51.97		2895.6	7.4
z11UPC05-53	zircon	130.3	10.43	210.0	79.8	2.6	228.4	0.38	118.4	3.47	0.73	42.75		1064	8.6
z11UPC05-55	zircon	124.2	9.94	205.6	87.6	5.7	225.8	0.43	111.4	3.47	0.73	42.75		1701.3	7
z11UPC05-56	zircon	882.6	70.60	66.1	32.1	0.6	73.5	0.48	298.5	7.06	0.79	56.81		1841.7	6
z11UPC05-58	zircon	833.2	66.65	132.9	92.0	1.2	154.0	0.69	604.4	10.46	0.81	64.52		2098	8.3
z11UPC05-61	zircon	668.1	53.45	167.1	71.1	1.7	183.5	0.43	537.5	5.31	0.77	51.23		2081.6	5.5
z11UPC05-65	zircon	87.7	7.01	111.7	76.6	0.6	129.4	0.69	47.7	5.77	0.77	52.38		3121.3	6.8
z11UPC05-66	zircon	203.3	16.27	65.9	69.8	1.1	81.9	1.06	70.6	5.58	0.77	52.69		1974	16
z11UPC05-67	zircon	458.1	36.64	32.8	40.6	0.8	42.1	1.24	86.1	9.69	0.80	60.14		1920	10
z11UPC05-68	zircon	513.3	41.06	80.9	21.3	0.5	85.8	0.26	189.4	4.98	0.77	49.64		1783.6	6.7
z11UPC05-74	zircon	346.0	27.68	53.2	85.4	5.5	72.9	1.60	105.4	5.48	0.75	48.92		1716.2	8.4
z11UPC05-77	zircon	110.7	8.85	270.1	69.2	3.4	286.0	0.26	139.1	10.41	0.81	61.18		974	14
z11UPC05-89	zircon	140.0	11.20	67.1	48.1	1.0	78.1	0.72	46.0	5.52	0.77	51.74		1787.5	8.4
z11UPC05-93	zircon	311.7	24.94	50.7	28.7	0.5	57.3	0.57	77.3	6.26	0.78	54.61		996	12
z11UPC05-95	zircon	357.9	28.64	112.2	58.3	1.5	125.7	0.52	200.4	8.84	0.80	60.51		1659	13
z11UPC05-105	zircon	186.3	14.91	114.2	52.7	2.5	126.3	0.46	100.3	6.43	0.78	53.20		1054.5	6.8
z11UPC05-109	zircon	731.5	58.52	42.2	33.4	0.7	49.9	0.79	165.6	8.07	0.79	57.93		3264.2	5.6
z11UPC05-114	zircon	296.6	23.73	46.5	45.5	0.5	57.0	0.98	70.3	4.59	0.75	48.20		1124	11

Table 3a: Indianola Group: Gunnison Plateau: Chicken Creek

Reduced (U-Th[Sm])/He Data															
Sample	**mineral**	**Age, Ma**	**err., Ma**	**U (ppm)**	**Th (ppm)**	**147Sm (ppm)**	**[U]e**	**Th/U**	**He (nmol/g)**	**mass (ug)**	**Ft**	**ESR**		**Best age**	**error**
z13GPI01-17	zircon	386.8	30.95	131.9	61.5	0.8	146.0	0.47	237.9	4.73	0.76	48.47		1742.3	6.9
z13GPI01-18	zircon	285.1	22.80	104.8	142.4	1.5	137.6	1.36	177.6	11.81	0.82	68.10		1778.7	6.7
z13GPI01-19	zircon	564.8	45.19	41.0	25.3	1.4	46.9	0.62	109.1	3.21	0.73	43.76		1660.6	9.8
z13GPI01-24	zircon	308.8	24.70	96.1	83.2	1.2	115.2	0.87	138.0	2.75	0.70	39.28		384.5	4.3
z13GPI01-26	zircon	171.6	13.73	201.3	127.6	5.1	230.7	0.63	164.9	4.66	0.76	49.56		1088.4	7.1
z13GPI01-28	zircon	134.8	10.79	103.2	67.5	2.1	118.8	0.65	60.8	2.56	0.70	37.96		449.6	5
z13GPI01-29	zircon	283.5	22.68	176.6	51.3	1.0	188.4	0.29	211.8	3.04	0.72	40.85		904	17
z13GPI01-31	zircon	326.6	26.13	341.4	147.2	1.7	375.3	0.43	479.5	2.44	0.71	39.37		608.9	4.7
z13GPI01-36	zircon	84.5	6.76	92.8	61.8	1.0	107.0	0.67	29.4	0.89	0.60	27.57		90.1	1.6
z13GPI01-38	zircon	463.9	37.12	126.9	34.7	0.7	134.9	0.27	248.7	2.35	0.71	39.60		1921.9	8.2
z13GPI01-54	zircon	497.1	39.77	56.5	78.2	1.5	74.5	1.38	145.8	2.62	0.70	39.97		952.2	9.8
z13GPI01-68	zircon	315.3	25.22	58.4	53.3	7.3	70.7	0.91	88.9	3.27	0.72	42.29		1033	12
z13GPI01-71	zircon	233.0	18.64	133.6	47.9	1.1	144.6	0.36	139.1	4.77	0.75	46.83		370.2	3.2
z13GPI01-72	zircon	338.1	27.05	214.2	73.2	0.8	231.1	0.34	291.1	1.78	0.68	34.66		1938.7	9.2
z13GPI01-83	zircon	328.5	26.28	86.5	55.6	0.7	99.3	0.64	124.2	2.07	0.69	37.10		2835	10
z13GPI01-94	zircon	362.9	29.03	158.2	85.4	0.9	177.9	0.54	248.8	2.17	0.70	37.85		2071	11
z13GPI01-102	zircon	220.5	17.64	16.5	22.4	0.6	21.7	1.36	18.5	2.46	0.71	40.24		624.1	6.2
z13GPI01-111	zircon	216.7	17.33	90.7	41.7	1.0	100.3	0.46	83.5	2.49	0.70	38.36		287.8	9.2
z13GPI01-120	zircon	180.0	14.40	83.2	74.4	0.6	100.4	0.89	74.9	4.45	0.76	49.16		236	3.4
z13GPI02-8	zircon	277.9	22.23	59.5	53.8	0.7	71.9	0.90	76.8	2.18	0.70	38.56		1671.8	9.8
z13GPI02-14	zircon	164.2	13.14	60.0	30.6	0.5	67.0	0.51	47.0	6.36	0.78	54.13		436.3	4.8
z13GPI02-15	zircon	192.4	15.39	75.0	20.7	1.2	79.8	0.28	63.1	4.62	0.75	46.54		1042.5	8.5
z13GPI02-19	zircon	186.7	14.94	137.2	67.2	0.6	152.7	0.49	120.7	5.35	0.77	52.14		2643	10
z13GPI02-29	zircon	472.8	37.83	74.9	52.9	0.5	87.1	0.71	179.4	5.99	0.78	53.83		2669.7	8.1

z13GPI02-32	zircon	261.3	20.91	58.0	37.7	1.2	66.7	0.65	67.2	2.20	0.70	38.68		1144	11
z13GPI02-38	zircon	181.5	14.52	69.9	54.8	0.9	82.5	0.78	63.6	5.91	0.78	53.14		1018.1	8.5
z13GPI02-52	zircon	179.9	14.39	55.0	38.1	0.9	63.8	0.69	46.5	3.84	0.74	45.13		436	5.5
z13GPI02-55	zircon	249.2	19.94	104.3	51.1	1.3	116.0	0.49	116.4	3.26	0.73	43.45		1735.4	8.8
z13GPI02-58	zircon	178.2	14.26	96.2	28.9	0.8	102.8	0.30	69.4	2.05	0.69	36.93		572.3	7.2
z13GPI02-89	zircon	155.9	12.47	264.6	43.0	1.0	274.6	0.16	169.3	2.70	0.73	41.28		1106	19
z13GPI02-92	zircon	396.7	31.74	153.9	130.4	0.8	183.9	0.85	255.7	1.23	0.63	30.88		1906.2	6.5
z13GPI02-93	zircon	326.1	26.09	155.7	56.5	0.7	168.7	0.36	237.5	5.99	0.78	53.53		479.5	9.4
z13GPI02-100	zircon	178.9	14.31	161.2	96.5	0.8	183.4	0.60	144.3	8.66	0.80	60.91		1733.7	7.6
z13GPI02-103	zircon	130.4	10.43	141.3	17.0	0.7	145.2	0.12	79.9	5.92	0.78	51.33		1712.7	8.2
z13GPI02-112	zircon	1014.9	81.19	24.3	9.1	0.1	26.4	0.37	121.1	5.03	0.77	50.53		1922	8.8
z13GPI03-2	zircon	172.4	13.79	113.9	31.4	0.5	121.1	0.28	88.4	5.26	0.78	51.81		1860	7.6
z13GPI03-3	zircon	178.7	14.30	34.7	25.1	0.6	40.5	0.72	32.6	12.12	0.82	68.48		1132	12
z13GPI03-7	zircon	242.4	19.39	82.3	68.6	2.3	98.1	0.83	93.4	3.26	0.72	41.04		1680.4	8.2
z13GPI03-11	zircon	183.8	14.70	355.2	149.2	1.5	389.6	0.42	315.2	8.53	0.80	60.70		1784.7	5.2
z13GPI03-12	zircon	316.0	25.28	98.7	89.3	1.1	119.3	0.90	150.1	2.82	0.72	42.18		1563	14
z13GPI03-20	zircon	158.6	12.69	851.4	366.5	2.9	935.7	0.43	609.8	4.28	0.75	47.11		165.7	1.2
z13GPI03-23	zircon	222.8	17.82	65.1	22.7	0.7	70.4	0.35	70.8	11.77	0.82	67.15		1140.5	7.3
z13GPI03-25	zircon	141.0	11.28	322.8	122.6	3.4	351.0	0.38	216.2	8.03	0.80	59.42		1701	7.4
z13GPI03-44	zircon	170.8	13.67	95.1	49.6	0.9	106.5	0.52	72.1	3.15	0.73	42.25		1072	10
z13GPI03-48	zircon	391.7	31.34	176.9	80.5	1.3	195.4	0.45	339.3	7.98	0.80	58.37		408.3	3.6
z13GPI03-53	zircon	163.1	13.05	175.1	46.6	0.8	185.8	0.27	132.5	7.65	0.80	58.81		1067.6	9.6
z13GPI03-63	zircon	168.8	13.50	159.8	62.9	1.6	174.3	0.39	126.4	6.31	0.79	55.09		2481	7.1
z13GPI03-68	zircon	334.8	26.78	320.2	73.0	0.9	337.0	0.23	499.3	7.51	0.80	58.36		597.8	6.6
z13GPI03-75	zircon	142.7	11.42	127.3	31.6	0.4	134.5	0.25	87.7	16.68	0.84	73.06		2590.6	9.7
z13GPI03-77	zircon	169.2	13.53	133.6	51.1	1.2	145.4	0.38	101.3	4.43	0.75	47.20		2111.2	8.9
z13GPI03-96	zircon	245.5	19.64	243.0	140.1	1.2	275.3	0.58	285.1	5.82	0.77	50.78		439.4	4
z13GPI03-105	zircon	236.8	18.95	144.4	69.0	1.9	160.3	0.48	168.5	10.37	0.81	61.94		822	13
z13GPI03-117	zircon	396.4	31.71	143.6	75.9	1.0	161.1	0.53	268.4	4.24	0.76	48.16		1739.7	6.4

z13GPI03-121	zircon	189.3	15.15	81.5	51.9	0.8	93.4	0.64	71.7	3.93	0.74	45.23		422.3	3.8
z13GPI04-8	zircon	177.8	14.22	200.8	116.5	3.9	227.6	0.58	166.1	4.15	0.75	47.00		2601.3	6.8
z13GPI04-14	zircon	176.4	14.11	177.7	108.3	10.0	202.7	0.61	143.8	3.37	0.74	44.14		1133	14
z13GPI04-15	zircon	290.4	23.23	52.2	15.5	0.7	55.8	0.30	64.6	2.94	0.72	41.46		497	14
z13GPI04-16	zircon	206.7	16.53	96.8	59.3	1.3	110.4	0.61	103.3	12.77	0.82	68.76		698.5	7
z13GPI04-25	zircon	236.5	18.92	234.0	98.3	1.6	256.6	0.42	261.8	6.26	0.79	54.90		1691	16
z13GPI04-34	zircon	168.2	13.46	71.8	76.2	2.1	89.3	1.06	66.9	10.43	0.81	65.10		536	23
z13GPI04-36	zircon	168.0	13.44	145.0	122.3	5.0	173.2	0.84	123.0	6.23	0.77	52.60		2728.8	5.9
z13GPI04-40	zircon	212.9	17.04	163.7	33.7	1.5	171.5	0.21	152.2	4.40	0.76	48.22		985	34
z13GPI04-42	zircon	194.2	15.54	89.1	41.2	1.5	98.6	0.46	80.4	4.99	0.77	50.36		1108	13
z13GPI04-45	zircon	166.2	13.29	215.8	76.6	1.6	233.4	0.36	162.7	4.97	0.77	50.31		1075.3	6.6
z13GPI04-47	zircon	490.5	39.24	157.2	69.2	1.4	173.1	0.44	331.4	2.32	0.70	37.99		708.4	9.3
z13GPI04-50	zircon	232.2	18.57	74.0	93.4	2.8	95.5	1.26	91.3	4.18	0.75	47.65		1963	27
z13GPI04-52	zircon	1225.8	98.06	27.1	22.4	0.4	32.3	0.83	176.7	4.29	0.75	47.00		1111.9	9.4
z13GPI04-60	zircon	474.0	37.92	270.7	167.7	3.2	309.4	0.62	614.3	4.83	0.75	46.96		1770	13
z13GPI04-61	zircon	241.2	19.30	163.2	75.3	9.3	180.6	0.46	182.0	5.86	0.76	48.89		1692.2	8.8
z13GPI04-91	zircon	286.5	22.92	409.1	145.6	1.9	442.6	0.36	568.3	9.73	0.81	63.17		301.9	3.3
z13GPI04-117	zircon	265.4	21.23	135.0	59.5	1.2	148.7	0.44	163.6	4.28	0.75	47.33		576.1	5.1
													He Age *		
z13GPI05-1	zircon	313.8	25.10	81.7	25.4	1.3	87.6	0.31	105.4	2.04	0.70	37.29	375.6	929	13
z13GPI05-3	zircon	274.6	21.97	61.5	31.7	0.4	68.8	0.52	75.2	2.91	0.72	41.82	328.7	2117.2	9.1
z13GPI05-12	zircon	141.5	11.32	189.1	107.7	2.0	213.9	0.57	125.1	4.70	0.76	48.53	169.4	1614.1	7.8
z13GPI05-16	zircon	243.2	19.46	187.5	84.2	1.2	206.9	0.45	201.9	3.51	0.73	42.99	291.1	1216.6	8.7
z13GPI05-17	zircon	638.8	51.11	85.5	55.7	1.0	98.3	0.65	255.9	2.89	0.72	41.74	764.7	1627	10
z13GPI05-33	zircon	434.2	34.74	141.9	94.7	0.6	163.7	0.67	279.2	2.62	0.71	39.49	519.8	651.6	6.2
z13GPI05-37	zircon	1165.6	93.25	25.9	12.6	0.5	28.8	0.49	161.1	8.32	0.80	59.03	1395.2	2136	14
z13GPI05-42	zircon	261.1	20.89	125.9	75.6	0.8	143.3	0.60	142.8	2.04	0.70	37.71	312.5	1730.8	7.2
z13GPI05-51	zircon	382.8	30.62	77.3	31.0	1.8	84.4	0.40	121.6	1.94	0.68	35.33	458.2	472.4	4.7
z13GPI05-58	zircon	335.5	26.84	115.3	14.5	1.4	118.6	0.13	164.4	3.47	0.75	45.15	401.6	2765.8	6.1

z13GPI05-59	zircon	417.4	33.39	166.7	123.5	1.7	195.2	0.74	330.4	3.17	0.73	43.34	499.6	493.9	4.9
z13GPI05-71	zircon	168.2	13.46	44.9	32.6	0.7	52.4	0.73	32.9	1.89	0.68	36.41	201.4	3291.9	4.9
z13GPI05-73	zircon	258.7	20.69	59.2	39.2	0.8	68.3	0.66	69.3	2.70	0.71	40.57	309.6	597.2	4.9
z13GPI05-74	zircon	280.9	22.47	246.2	95.6	1.3	268.3	0.39	293.6	2.42	0.71	39.24	336.2	1196.3	9.9
z13GPI05-91	zircon	441.0	35.28	40.5	33.0	1.8	48.1	0.82	83.6	2.48	0.71	39.98	527.9	1800.6	6.5
z13GPI05-95	zircon	268.8	21.51	60.3	16.7	0.5	64.1	0.28	72.3	4.84	0.76	48.83	321.8	568.2	8.1
z13GPI05-100	zircon	288.5	23.08	52.8	15.3	0.6	56.3	0.29	67.8	4.43	0.76	47.86	345.3	2721.3	9.7
z13GPI05-113	zircon	263.2	21.06	189.7	33.2	0.4	197.3	0.18	215.0	4.00	0.75	46.40	315.1	2089	19
z13GPI05-117	zircon	266.4	21.32	118.1	41.7	0.7	127.7	0.35	148.4	7.25	0.79	56.72	318.9	1145	10
z13GPI05-119	zircon	293.2	23.46	306.2	132.6	3.2	336.7	0.43	376.1	2.15	0.69	36.99	351.0	1045	18
z13GPI06-2	zircon	157.5	12.60	265.3	177.1	1.4	306.1	0.67	214.0	11.63	0.81	64.00	188.6	258.1	1.9
z13GPI06-3	zircon	269.0	21.52	17.6	24.0	1.4	23.1	1.36	25.3	4.03	0.74	45.31	322.0	2717.5	8.3
z13GPI06-4	zircon	183.7	14.69	133.6	80.2	1.1	152.1	0.60	117.5	5.05	0.77	51.06	219.8	1645.9	8.8
z13GPI06-6	zircon	336.8	26.94	131.8	74.0	1.1	148.9	0.56	202.3	3.48	0.73	43.06	403.1	986.8	9.3
z13GPI06-7	zircon	234.6	18.77	83.0	30.7	0.4	90.1	0.37	95.0	11.32	0.82	65.33	280.8	1657	13
z13GPI06-12	zircon	342.7	27.42	133.1	39.8	0.3	142.2	0.30	229.3	20.29	0.85	78.64	410.2	1056	6.9
z13GPI06-13	zircon	273.3	21.86	131.9	40.9	3.2	141.3	0.31	143.1	1.71	0.68	34.53	327.1	999.2	8
z13GPI06-15	zircon	286.7	22.94	50.3	34.3	0.6	58.2	0.68	68.7	4.28	0.75	46.43	343.2	550.4	8
z13GPI06-24	zircon	314.9	25.19	131.1	180.2	12.2	172.6	1.38	220.8	3.41	0.73	45.01	376.9	1592.9	8.1
z13GPI06-27	zircon	434.1	34.73	102.0	39.3	0.7	111.0	0.39	205.8	4.90	0.77	49.89	519.7	1528	21
z13GPI06-33	zircon	712.6	57.01	80.9	75.4	0.6	98.2	0.93	317.1	7.53	0.79	58.42	853.0	2668	13
z13GPI06-36	zircon	379.0	30.32	57.5	36.1	1.1	65.8	0.63	99.9	2.91	0.72	42.02	453.7	619.3	5.5
z13GPI06-37	zircon	98.6	7.89	72.7	36.4	0.7	81.1	0.50	30.5	2.58	0.70	38.34	98.6	96.3	1.8
z13GPI06-44	zircon	305.4	24.43	155.2	110.0	0.8	180.5	0.71	220.7	3.24	0.73	42.64	365.5	446.1	5.4
z13GPI06-48	zircon	315.6	25.25	83.9	64.7	0.5	98.8	0.77	133.4	6.17	0.77	52.85	315.6	302.8	4.1
z13GPI06-63	zircon	283.6	22.69	71.8	106.4	0.5	96.3	1.48	111.0	3.60	0.74	45.43	339.5	1753	17
z13GPI06-74	zircon	224.7	17.98	307.1	114.5	1.2	333.4	0.37	301.9	3.47	0.74	43.52	269.0	1466.6	9.2
z13GPI06-80	zircon	1006.5	80.52	78.2	35.5	2.6	86.4	0.45	358.5	2.40	0.71	39.25	1204.8	1914.4	8.2
z13GPI06-119	zircon	512.7	41.01	246.9	72.5	0.3	263.6	0.29	547.4	3.03	0.72	41.39	613.6	1033.4	8

										*Post analysis He-tank depletion correction factor .197

Table 3a: Indianola Group: Sixmile Canyon

Reduced (U-Th[Sm])/He Data															
Sample	**mineral**	**Age, Ma**	**err., Ma**	**U (ppm)**	**Th (ppm)**	**147Sm (ppm)**	**[U]e**	**Th/U**	**He (nmol/g)**	**mass (ug)**	**Ft**	**ESR**		**Best age**	**error**
z13SM01-2	zircon	945.1	75.61	105.5	49.3	2.5	116.9	0.47	509.4	7.92	0.79	55.80		1450	34
z13SM01-6	zircon	981.6	78.52	27.4	9.2	0.5	29.5	0.34	136.8	10.14	0.80	59.50		1033	14
z13SM01-10	zircon	240.1	19.21	101.5	83.8	3.8	120.8	0.83	113.3	2.69	0.71	40.36		1620	11
z13SM01-15	zircon	148.0	11.84	91.6	64.4	8.7	106.5	0.70	61.3	2.66	0.71	40.44		1094	12
z13SM01-16	zircon	319.0	25.52	328.3	263.5	2.1	389.0	0.80	510.9	3.73	0.75	46.38		497.6	3.2
z13SM01-18	zircon	203.1	16.24	341.9	254.5	13.0	400.6	0.74	312.2	2.50	0.70	38.74		1432.4	7.1
z13SM01-21	zircon	1259.1	100.72	69.4	67.6	1.0	85.0	0.97	504.3	6.32	0.78	55.36		2822.5	4.8
z13SM01-26	zircon	796.0	63.68	45.7	58.2	3.1	59.2	1.27	197.3	3.68	0.73	44.65		1973	17
z13SM01-27	zircon	118.8	9.50	122.0	72.3	5.7	138.7	0.59	70.6	6.67	0.79	55.66		1083	18
z13SM01-30	zircon	331.2	26.49	59.2	46.2	1.3	69.8	0.78	89.3	2.49	0.70	38.56		430.4	4.6
z13SM01-32	zircon	63.6	5.09	1557.0	870.5	16.8	1757.4	0.56	431.5	2.41	0.71	39.99		1437.3	8.8
z13SM01-33	zircon	653.5	52.28	106.3	52.6	1.9	118.4	0.49	347.1	7.20	0.79	56.14		1650	19
z13SM01-44	zircon	103.0	8.24	38.1	33.2	2.8	45.7	0.87	18.1	2.54	0.71	39.73		1112	18
z13SM01-50	zircon	242.6	19.41	201.5	114.1	3.8	227.8	0.57	204.2	1.76	0.67	34.88		433.3	5.2
z13SM01-60	zircon	237.2	18.97	220.6	58.9	3.1	234.2	0.27	225.6	3.70	0.74	44.19		1088.6	7
z13SM01-62	zircon	133.5	10.68	260.7	131.1	10.4	291.0	0.50	156.8	3.89	0.74	44.90		1705.9	6.4
z13SM01-73	zircon	86.7	6.94	30.7	52.0	7.5	42.7	1.69	15.6	6.29	0.77	53.54		1098	22
z13SM01-91	zircon	1268.1	101.45	87.8	79.0	2.3	106.0	0.90	649.0	8.36	0.80	59.66		2660.3	6.8
z13SM01-96	zircon	292.9	23.43	185.5	137.9	9.0	217.3	0.74	261.7	3.73	0.75	46.38		1710.3	6.8
z13SM01-101	zircon	278.1	22.25	199.1	48.8	1.9	210.3	0.25	242.9	4.12	0.75	46.96		1834.3	7.9
z13SM01-113	zircon	635.3	50.82	188.8	90.7	6.6	209.7	0.48	487.4	1.43	0.65	32.13		1074	11
z13SM01-116	zircon	177.9	14.23	100.2	74.0	5.7	117.2	0.74	77.5	1.93	0.68	35.88		1910.7	9

z13SM02-5	zircon	438.9	26.34	127.0	102.9	1.6	150.7	0.81	287.5	6.83	0.78	54.09		1915.8	6.5
z13SM02-6	zircon	423.6	25.41	42.5	34.4	10.2	50.5	0.81	95.0	8.22	0.80	58.83		1944	12
z13SM02-7	zircon	262.4	15.74	175.0	176.3	1.9	215.6	1.01	239.7	6.32	0.77	51.87		440.7	3.7
z13SM02-8	zircon	145.4	8.73	80.1	59.9	1.0	93.9	0.75	61.5	12.44	0.82	68.95		2634	6.6
z13SM02-10	zircon	242.3	14.54	61.3	61.8	1.0	75.5	1.01	78.4	6.12	0.78	54.35		496.7	4.4
z13SM02-13	zircon	790.9	47.45	85.0	94.1	2.1	106.6	1.11	363.9	4.81	0.75	48.54		1920.1	7.7
z13SM02-21	zircon	121.0	7.26	169.0	120.6	2.1	196.8	0.71	100.2	5.55	0.77	52.12		1065.5	6.2
z13SM02-39	zircon	992.2	59.53	58.9	75.2	0.9	76.2	1.28	373.0	16.89	0.84	76.77		2699.1	7.4
z13SM02-59	zircon	291.3	17.48	60.9	80.0	2.9	79.3	1.31	98.7	5.72	0.77	53.29		3230.1	6.3
z13SM02-64	zircon	437.4	26.25	40.7	26.9	0.8	46.9	0.66	89.2	6.25	0.78	53.85		2660	22
z13SM02-70	zircon	747.0	44.82	94.9	42.3	2.6	104.6	0.45	372.5	15.02	0.83	69.54		1445.4	9.3
z13SM02-77	zircon	111.7	6.70	168.4	95.7	2.7	190.4	0.57	94.7	11.46	0.82	65.73		1712.7	7
z13SM02-86	zircon	167.6	10.06	95.4	134.7	3.2	126.5	1.41	85.3	3.74	0.73	44.98		1648	9.6
z13SM02-92	zircon	160.3	9.62	125.4	127.9	1.4	154.8	1.02	107.4	8.33	0.79	57.65		1418.7	9.9
z13SM02-93	zircon	164.0	9.84	187.9	99.6	5.5	210.9	0.53	146.8	6.18	0.78	52.85		1079.9	6.6
z13SM02-98	zircon	169.1	10.15	93.8	63.0	1.9	108.3	0.67	84.5	18.36	0.84	77.00		1794.8	7.7
z13SM02-103	zircon	365.4	21.92	140.6	107.1	1.9	165.3	0.76	256.3	5.06	0.77	50.66		1467.4	8.2
z13SM02-114	zircon	273.9	16.43	126.2	90.1	1.1	146.9	0.71	172.0	6.11	0.78	53.09		436.3	4.4
z13SM02-116	zircon	417.5	33.40	71.3	62.8	0.8	85.8	0.88	152.7	5.19	0.77	50.99		3058.5	6.6
z13SM03-2	zircon	348.1	27.84	314.2	85.7	0.9	333.9	0.27	496.4	5.05	0.77	50.85		1078.6	6.7
z13SM03-7	zircon	132.9	10.63	498.8	144.0	5.5	532.0	0.29	239.0	1.02	0.62	28.94		465.8	4.4
z13SM03-14	zircon	302.6	24.21	41.5	18.6	0.5	45.8	0.45	52.0	1.78	0.68	35.67		361.3	6.3
z13SM03-29	zircon	234.5	18.76	234.2	141.5	1.3	266.8	0.60	250.6	3.27	0.73	43.13		609.6	4.9
z13SM03-33	zircon	192.3	15.39	167.7	153.7	3.8	203.1	0.92	150.2	2.32	0.70	39.14		1720	18
z13SM03-37	zircon	96.7	7.73	441.0	229.4	1.2	493.9	0.52	156.8	1.15	0.61	27.90		94.45	0.98
z13SM03-39	zircon	312.0	24.96	289.4	197.6	1.7	334.9	0.68	409.2	2.96	0.71	40.05		455.7	3.9
z13SM03-45	zircon	879.3	70.34	54.4	31.2	0.5	61.5	0.57	218.0	2.14	0.70	38.42		2600.1	7.8
z13SM03-46	zircon	259.8	20.78	198.7	72.4	2.5	215.4	0.36	216.0	2.20	0.70	38.35		1637	11
z13SM03-52	zircon	215.0	17.20	208.7	41.1	0.6	218.1	0.20	182.7	2.43	0.71	39.17		382.1	2.9

z13SM03-54	zircon	101.6	8.13	231.5	115.2	0.8	258.0	0.50	94.0	1.39	0.66	33.13		98.5	2
z13SM03-61	zircon	207.5	16.60	56.7	21.5	0.3	61.6	0.38	51.1	3.12	0.73	42.54		1880	24
z13SM03-68	zircon	70.3	5.62	42.3	27.0	0.3	48.5	0.64	12.6	1.81	0.68	35.76		439.8	8.5
z13SM03-69	zircon	149.4	11.95	88.3	41.0	1.4	97.7	0.46	59.1	3.49	0.74	45.03		1139	7.9
z13SM03-92	zircon	241.8	19.34	71.1	28.4	0.8	77.7	0.40	67.5	1.46	0.66	32.48		1517	12
z13SM03-93	zircon	181.2	14.50	45.2	58.0	0.6	58.6	1.28	46.7	8.98	0.80	61.57		2668.3	7.4
z13SM03-102	zircon	299.8	23.98	151.8	50.3	9.5	163.4	0.33	189.2	2.24	0.70	38.05		1052	14
z13SM03-103	zircon	157.0	12.56	82.3	43.7	2.4	92.4	0.53	54.7	1.95	0.69	37.04		1074.5	9.4
z13SM03-104	zircon	283.1	22.64	281.2	48.5	1.0	292.4	0.17	313.2	2.02	0.69	35.87		417	3.5
z13SM03-109	zircon	317.4	25.39	25.8	24.9	1.5	31.6	0.96	41.9	4.59	0.76	48.92		1134	13
z13SM03-114	zircon	131.8	10.54	208.8	236.1	2.2	263.1	1.13	134.7	2.96	0.71	40.80		2651	24
z13SM03-115	zircon	99.9	8.00	196.0	44.3	0.4	206.3	0.23	74.2	1.41	0.66	32.94		1439	10
z13SM03-120	zircon	149.1	11.93	58.3	35.5	0.9	66.5	0.61	38.8	2.66	0.72	41.04		1660	22
z13SM04-1	zircon	258.8	20.70	73.2	28.6	0.6	79.8	0.39	78.8	2.31	0.70	37.30		946.6	8.5
z13SM04-11	zircon	322.6	25.81	236.1	65.4	0.6	251.1	0.28	327.5	3.36	0.73	42.81		343.3	2.5
z13SM04-19	zircon	208.8	16.71	67.0	43.3	1.2	77.0	0.65	62.2	2.44	0.71	39.44		1465.5	9.5
z13SM04-24	zircon	176.1	14.09	33.6	15.5	0.6	37.2	0.46	25.4	2.50	0.71	39.66		1092	13
z13SM04-31	zircon	173.6	13.89	233.6	151.0	1.6	268.4	0.65	176.9	2.99	0.70	37.76		180.6	2.1
z13SM04-36	zircon	102.8	8.23	671.5	209.1	0.6	719.7	0.31	280.0	2.43	0.70	37.31		104.04	0.83
z13SM04-40	zircon	122.5	9.80	47.7	20.6	0.3	52.5	0.43	26.7	4.93	0.76	49.56		2814.6	7.2
z13SM04-43	zircon	502.5	40.20	100.4	55.2	1.0	113.1	0.55	220.6	2.29	0.70	37.63		1051	7.6
z13SM04-53	zircon	410.1	32.81	137.9	100.1	2.5	161.0	0.73	255.3	2.37	0.70	38.15		453	3.8
z13SM04-56	zircon	104.0	8.32	336.5	162.9	1.5	374.0	0.48	152.7	3.04	0.72	41.59		96.8	1.3
z13SM04-60	zircon	363.9	29.11	55.9	37.1	1.5	64.5	0.66	94.5	3.72	0.73	42.79		567.7	5.8
z13SM04-61	zircon	151.4	12.11	45.8	20.0	0.6	50.4	0.44	31.0	3.78	0.75	45.61		1020	11
z13SM04-62	zircon	137.5	11.00	261.1	117.0	3.0	288.1	0.45	147.2	2.03	0.68	35.73		1713.1	6.9
z13SM04-64	zircon	192.0	15.36	63.5	37.7	0.5	72.1	0.59	56.1	3.55	0.74	44.92		1647.4	8.3
z13SM04-69	zircon	335.8	26.87	46.5	22.0	0.5	51.6	0.47	67.0	2.32	0.70	38.29		606.7	6.2
z13SM04-72	zircon	105.2	8.41	120.9	87.9	1.6	141.1	0.73	60.6	4.46	0.75	47.10		1433.3	7.5

z13SM04-74	zircon	135.6	10.84	120.6	106.9	2.4	145.2	0.89	79.9	4.13	0.74	46.08		1697.9	8.8
z13SM04-90	zircon	116.6	9.33	163.0	106.1	1.1	187.5	0.65	82.8	2.07	0.70	37.80		1140.4	9.6
z13SM04-93	zircon	94.4	7.55	444.0	173.9	0.7	484.0	0.39	180.2	3.58	0.73	42.04		94.8	1.3
z13SM04-101	zircon	309.3	24.74	29.2	28.0	0.4	35.7	0.96	41.3	1.94	0.68	36.02		1959	11
z13SM04-107	zircon	184.6	14.77	392.0	153.0	1.7	427.2	0.39	294.5	1.81	0.68	35.78		1699.7	5.7
z13SM04-110	zircon	130.3	10.42	171.7	74.0	1.3	188.7	0.43	94.5	2.58	0.71	38.98		1472.3	8.2
z13SM04-116	zircon	99.9	8.00	84.6	25.5	0.8	90.4	0.30	33.0	1.66	0.67	34.29		1061	10
z13SM05-5	zircon	195.9	15.67	38.4	29.5	3.1	45.2	0.77	38.2	7.87	0.79	56.30		1025	18
z13SM05-14	zircon	521.9	41.75	81.9	30.6	1.4	89.0	0.37	183.9	2.37	0.71	39.05		1486.5	8
z13SM05-17	zircon	231.4	18.51	47.7	26.9	0.8	53.9	0.56	46.9	2.01	0.69	36.38		1006	12
z13SM05-19	zircon	96.0	7.68	480.8	221.0	0.8	531.7	0.46	207.8	4.75	0.75	46.51		96.59	0.83
z13SM05-21	zircon	105.2	8.42	560.4	319.3	2.9	633.9	0.57	249.4	2.31	0.69	36.61		94.3	1.2
z13SM05-22	zircon	225.1	18.01	180.1	42.4	1.4	189.8	0.24	178.0	4.18	0.76	48.09		1087.9	8.6
z13SM05-23	zircon	300.4	24.03	587.4	221.1	2.8	638.3	0.38	708.0	1.60	0.67	34.23		1594.7	7.1
z13SM05-27	zircon	394.5	31.56	162.1	53.0	1.6	174.3	0.33	279.1	3.38	0.73	42.77		957.7	8
z13SM05-29	zircon	350.2	28.02	107.9	110.0	3.0	133.3	1.02	170.5	1.63	0.66	33.99		2486.7	7.3
z13SM05-31	zircon	701.8	56.15	11.7	10.8	0.8	14.2	0.93	40.9	4.03	0.72	42.76		1037	17
z13SM05-38	zircon	172.1	13.77	358.8	226.3	1.5	410.9	0.63	248.7	1.31	0.64	31.69		1574.4	4.7
z13SM05-45	zircon	330.3	26.42	74.7	67.5	0.8	90.2	0.90	115.5	2.30	0.70	39.11		408.8	3.8
z13SM05-60	zircon	138.8	11.10	93.8	59.0	3.0	107.4	0.63	55.2	1.83	0.68	35.71		735	10
z13SM05-61	zircon	270.1	21.61	46.9	31.0	1.1	54.1	0.66	56.1	2.28	0.70	38.32		1068.1	7.9
z13SM05-62	zircon	174.9	14.00	217.8	181.0	5.6	259.5	0.83	165.9	1.77	0.67	34.66		1687	7.3
z13SM05-76	zircon	366.8	29.34	270.5	91.8	2.0	291.7	0.34	400.6	1.76	0.68	34.91		393.6	3.4
z13SM05-82	zircon	263.4	21.08	98.3	153.4	1.9	133.7	1.56	134.8	2.37	0.70	38.74		446	4.4
z13SM05-85	zircon	246.4	19.71	228.8	129.2	1.4	258.6	0.56	241.1	1.94	0.69	36.89		751.9	7.1
z13SM05-98	zircon	339.8	27.18	75.9	55.8	1.1	88.8	0.73	119.7	2.65	0.72	41.31		1483.1	9
z13SM05-102	zircon	344.7	27.58	96.4	52.4	2.3	108.5	0.54	146.5	2.35	0.71	39.58		768	10
z13SM05-103	zircon	432.3	34.58	135.0	91.3	1.6	156.0	0.68	268.6	2.75	0.72	40.93		1704.7	8.9

z13SMPR-6	zircon	151.8	12.15	167.6	104.2	1.6	191.6	0.62	127.2	7.99	0.80	59.88		1117.1	5.8
z13SMPR-13	zircon	110.1	8.81	233.1	89.2	0.8	253.6	0.38	110.6	2.94	0.73	42.36		1756.4	4.1
z13SMPR-20	zircon	153.4	12.27	23.1	28.1	1.9	29.5	1.22	20.1	10.53	0.81	64.97		1106	19
z13SMPR-27	zircon	450.0	36.00	107.2	68.0	0.8	122.9	0.63	247.2	8.06	0.80	59.75		1856.2	8.2
z13SMPR-30	zircon	325.8	26.06	134.0	64.4	2.3	148.9	0.48	201.2	4.15	0.75	46.88		1001.9	7.3
z13SMPR-32	zircon	371.7	29.74	61.1	28.7	0.8	67.7	0.47	110.9	7.22	0.79	57.42		1917	12
z13SMPR-39	zircon	1304.9	104.39	54.6	38.0	1.0	63.3	0.70	389.1	5.80	0.78	52.97		1662	16
z13SMPR-40	zircon	324.1	25.93	87.3	37.8	1.4	96.0	0.43	121.5	2.33	0.71	39.19		582	6.5
z13SMPR-43	zircon	879.9	70.40	116.1	65.2	2.6	131.1	0.56	467.9	2.51	0.70	38.98		1435	11
z13SMPR-46	zircon	412.5	33.00	63.8	66.9	3.9	79.2	1.05	123.9	1.98	0.68	36.72		2213.7	7.6
z13SMPR-50	zircon	149.3	11.94	33.4	82.3	2.8	52.3	2.47	31.2	3.85	0.73	44.50		1078	14
z13SMPR-53	zircon	171.3	13.71	69.6	68.9	1.8	85.4	0.99	61.6	5.32	0.77	51.79		1452.5	8
z13SMPR-57	zircon	186.5	14.92	110.7	41.7	3.0	120.3	0.38	90.0	3.14	0.73	43.24		1443	7.7
z13SMPR-60	zircon	1625.3	130.02	65.0	47.7	2.1	76.0	0.73	594.0	4.74	0.76	49.45		2691.6	5.8
z13SMPR-64	zircon	313.7	25.10	40.5	21.0	0.8	45.3	0.52	55.1	2.47	0.70	38.73		407.6	5.2
z13SMPR-71	zircon	273.0	21.84	157.0	53.1	1.5	169.3	0.34	185.4	3.51	0.73	42.49		408.3	3.9
z13SMPR-78	zircon	178.6	14.29	158.9	86.6	1.2	178.8	0.54	137.7	7.44	0.79	55.93		1432	8.9
z13SMPR-83	zircon	475.4	38.04	188.4	74.8	0.7	205.6	0.40	435.7	7.55	0.80	57.86		1649.2	7.3
z13SMPR-85	zircon	152.4	12.19	83.2	53.1	2.6	95.4	0.64	68.7	33.05	0.86	90.09		722.4	5.6
z13SMPR-93	zircon	400.2	32.02	313.6	117.8	2.1	340.7	0.38	622.2	13.39	0.82	65.77		424.1	3.9
z13SMPR-114	zircon	1103.9	88.31	34.1	40.8	1.6	43.5	1.19	217.4	5.67	0.77	51.82		1872	11

Table 3a: Indianola Group: Hop Creek: Cedar Hills

Reduced (U-Th[Sm])/He Data															
Sample	**mineral**	**Age, Ma**	**err., Ma**	**U (ppm)**	**Th (ppm)**	**147Sm (ppm)**	**[U]e**	**Th/U**	**He (nmol/g)**	**mass (ug)**	**Ft**	**ESR**		**Best age**	**error**
z13PCI01-6	zircon	428.7	34.29	194.1	99.7	0.8	217.0	0.51	359.3	2.10	0.70	37.59		638.3	5.6

z13PCI01-8	zircon	400.9	32.07	134.3	114.8	1.9	160.8	0.85	247.5	2.01	0.69	37.71		640.2	5.8
z13PCI01-15	zircon	319.4	25.55	264.1	62.3	1.9	278.5	0.24	341.3	2.52	0.70	37.07		1082	12
z13PCI01-16	zircon	475.0	38.00	22.8	27.6	1.1	29.1	1.21	55.3	3.41	0.72	41.68		2589.2	4.3
z13PCI01-17	zircon	242.1	19.37	125.4	47.8	0.8	136.4	0.38	129.8	2.81	0.72	40.45		285	2.5
z13PCI01-19	zircon	430.8	34.47	65.5	153.9	4.9	100.9	2.35	169.3	2.52	0.70	39.80		983.1	7.2
z13PCI01-22	zircon	338.1	27.05	198.5	93.8	2.0	220.1	0.47	292.3	2.82	0.71	39.81		419.1	3
z13PCI01-26	zircon	111.7	8.94	186.0	68.1	1.0	201.7	0.37	90.9	4.59	0.74	44.83		104.5	1.3
z13PCI01-28	zircon	418.7	33.49	281.6	476.6	3.5	391.3	1.69	675.7	4.03	0.74	46.46		3067.5	6.5
z13PCI01-34	zircon	391.6	31.33	66.8	43.2	1.3	76.7	0.65	120.7	2.99	0.72	42.16		640.4	5
z13PCI01-36	zircon	310.6	24.85	49.8	49.7	1.2	61.3	1.00	73.1	2.27	0.70	38.41		1671	16
z13PCI01-37	zircon	339.5	27.16	318.9	198.2	2.2	364.5	0.62	484.3	2.47	0.71	39.67		1651	12
z13PCI01-40	zircon	241.7	19.33	240.7	24.6	0.9	246.4	0.10	237.0	2.84	0.73	41.08		435.9	4.2
z13PCI01-46	zircon	496.6	39.73	93.4	87.0	2.8	113.5	0.93	238.3	4.83	0.76	48.65		1066	8.2
z13PCI01-54	zircon	940.9	75.27	92.3	40.1	2.4	101.5	0.43	377.0	1.99	0.68	35.83		1662.9	9.7
z13PCI01-117	zircon	195.0	15.60	285.2	153.4	0.6	320.6	0.54	259.5	5.62	0.76	48.61		175.3	1.9
z13PCI01-121	zircon	440.0	35.20	38.7	39.4	0.7	47.8	1.02	88.2	4.70	0.75	48.20		1880	10
z13PCI01-57	zircon	238.0	19.04	249.1	188.8	0.9	292.5	0.76	292.5	5.33	0.76	50.39		231.9	1.8
z13PCI01-61	zircon	324.0	25.92	61.1	12.5	1.6	64.0	0.20	91.9	8.60	0.80	58.64		1442	21
z13PCI01-67	zircon	398.2	31.86	76.4	12.3	0.6	79.2	0.16	129.7	3.55	0.74	44.01		2073	19
z13PCI01-76	zircon	397.2	31.77	46.0	25.4	0.5	51.8	0.55	86.0	4.13	0.75	47.36		1105	12
z13PCI01-94	zircon	1489.5	119.16	119.3	4.9	0.3	120.4	0.04	940.7	9.80	0.82	62.52		1883.3	7.5
z13PCI03-109	zircon	235.6	18.85	127.1	85.0	1.1	146.7	0.67	129.4	1.86	0.68	36.19		1639	16
z13PCI03-111	zircon	147.6	11.81	79.7	44.5	0.9	89.9	0.56	48.3	1.59	0.67	34.15		435	11
z13PCI03-29	zircon	138.7	11.09	48.0	34.5	0.5	56.0	0.72	32.4	5.24	0.77	50.67		2729	10
z13PCI03-35	zircon	108.0	8.64	331.7	218.3	1.1	382.0	0.66	167.0	3.94	0.74	45.77		1056.4	8.7
z13PCI03-37	zircon	156.8	12.55	48.4	36.8	1.0	56.9	0.76	36.4	4.51	0.75	46.68		1092	15
z13PCI03-41	zircon	519.1	41.53	63.6	113.5	1.0	89.8	1.78	196.1	4.94	0.75	48.55		2805.9	5.5
z13PCI03-46	zircon	282.5	22.60	296.2	66.5	0.3	311.5	0.22	368.8	4.31	0.76	48.32		1955.1	7.1
z13PCI03-48	zircon	156.9	12.55	160.4	66.3	0.9	175.6	0.41	113.4	4.29	0.75	47.39		1660.3	7.5

z13PCI03-51	zircon	97.0	7.76	116.2	51.9	0.9	128.2	0.45	50.6	3.83	0.75	46.12		990.7	7.8
z13PCI03-58	zircon	709.8	56.78	233.2	91.7	0.8	254.3	0.39	714.1	2.04	0.70	37.59		1779	10
z13PCI03-68	zircon	199.3	15.95	189.9	75.8	0.6	207.3	0.40	170.1	4.45	0.75	46.87		1964	12
z13PCI03-71	zircon	288.0	23.04	429.0	127.0	2.5	458.2	0.30	539.2	3.32	0.74	44.61		1651	4.9
z13PCI03-73	zircon	96.9	7.75	67.6	23.7	0.6	73.1	0.35	29.6	5.06	0.77	50.70		1075	14
z13PCI03-75	zircon	96.4	7.71	53.5	37.2	2.1	62.0	0.70	23.5	3.22	0.72	42.19		2097	13
z13PCI03-92	zircon	186.1	14.88	398.2	231.6	2.6	451.5	0.58	321.1	2.18	0.70	38.25		1099.7	7.7
z13PCI03-13	zircon	148.7	8.92	255.2	101.5	1.0	278.5	0.40	165.4	3.70	0.73	43.12		446.6	4.9
z13PCI03-2	zircon	157.8	9.47	288.0	121.4	1.3	316.0	0.42	206.5	4.58	0.76	48.36		430	4.1
z13PCI03-28	zircon	261.6	15.69	59.6	36.4	5.1	68.0	0.61	82.6	19.23	0.84	76.42		1097.1	9.4

Table 3a: Dakota Formation: West San Rafael Swell

Reduced (U-Th[Sm])/He Data															
Sample	**mineral**	**Age, Ma**	**err., Ma**	**U (ppm)**	**Th (ppm)**	**147Sm (ppm)**	**[U]e**	**Th/U**	**He (nmol/g)**	**mass (ug)**	**Ft**	**ESR**		**Best age**	**error**
z11UCCF02-03	zircon	280.0	22.40	301.5	122.2	1.3	329.6	0.41	372.9	3.24	0.73	43.48		346.7	2.4
z11UCCF02-06	zircon	308.3	24.67	264.7	121.1	0.7	292.6	0.46	384.0	5.08	0.77	51.32		356.7	2.5
z11UCCF02-08	zircon	116.6	9.32	116.0	75.5	0.7	133.4	0.65	63.3	3.87	0.75	46.50		475.7	5
z11UCCF02-11	zircon	400.5	32.04	180.8	70.4	0.7	197.0	0.39	340.5	5.38	0.78	52.40		1994.9	5.3
z11UCCF02-12	zircon	246.9	19.75	284.4	93.7	1.0	305.9	0.33	286.4	1.88	0.69	36.65		2673.9	5.2
z11UCCF02-17	zircon	1085.7	86.85	77.8	44.5	1.1	88.1	0.57	384.9	2.02	0.69	36.74		1388	9.7
z11UCCF02-18	zircon	650.2	52.01	51.1	38.5	1.0	60.0	0.75	142.4	1.43	0.65	32.35		1631	11
z11UCCF02-20	zircon	321.7	25.74	150.4	64.9	1.0	165.4	0.43	202.4	1.93	0.69	36.71		434.1	4.2
z11UCCF02-25	zircon	342.0	27.36	144.9	104.5	1.1	168.9	0.72	231.7	3.14	0.73	42.57		687.8	6.7
z11UCCF02-35	zircon	441.6	35.33	9.5	4.3	0.2	10.5	0.45	17.5	1.67	0.68	35.04		1020	10
z11UCCF02-47	zircon	318.0	25.44	100.2	111.6	1.4	125.9	1.11	153.0	2.24	0.69	38.03		471.9	5.1
z11UCCF02-49	zircon	94.7	7.57	88.9	61.7	0.8	103.1	0.69	42.3	7.73	0.80	58.89		1033.20	9.80
z11UCCF02-48	zircon	106.0	8.48	63.9	43.2	0.4	73.8	0.68	30.6	2.66	0.72	41.40		1028	14

z11UCCF02-51	zircon	221.4	17.71	167.9	26.5	1.0	174.0	0.16	150.0	2.53	0.71	39.02		428.4	3.4
z11UCCF02-58	zircon	427.7	34.22	44.2	53.3	1.2	56.5	1.21	96.0	2.99	0.71	41.35		551.8	5.9
z11UCCF02-71	zircon	300.9	24.07	125.9	77.2	0.7	143.6	0.61	161.7	1.91	0.68	35.66		621.4	4.6
z11UCCF02-73	zircon	566.1	45.29	109.0	82.1	0.9	127.9	0.75	285.9	2.26	0.70	39.17		1016.7	9.3
z11UCCF02-75	zircon	106.5	8.52	312.8	183.1	1.5	355.0	0.59	141.8	2.86	0.69	36.94		109.2	1.2
z11UCCF02-78	zircon	415.8	33.26	176.0	69.5	1.3	192.0	0.39	308.8	2.06	0.70	37.58		1980	14
z11UCCF02-82	zircon	276.8	22.15	56.7	43.5	0.9	66.7	0.77	72.4	2.66	0.71	40.53		1633	12
z11UCCF02-91	zircon	113.1	9.04	155.1	133.1	0.6	185.8	0.86	82.9	3.07	0.72	42.66		112.2	1.6
z11UCCF02-96	zircon	536.6	42.93	90.9	53.6	0.5	103.3	0.59	216.3	2.11	0.70	37.96		662.1	5.1
z11UCCF02-98	zircon	111.3	8.90	198.8	113.9	0.9	225.0	0.57	95.7	2.38	0.70	38.65		114.2	1.4
z11UCCF02-103	zircon	329.8	26.39	90.4	38.9	0.8	99.3	0.43	130.1	2.72	0.72	41.04		1027.5	8.9
z11UCCF02-105	zircon	353.2	28.26	127.0	48.2	0.7	138.1	0.38	190.7	2.28	0.71	39.02		2051.5	6.6
z11UCCF02-109	zircon	334.0	26.72	274.9	38.3	2.7	283.7	0.14	373.4	2.57	0.71	39.33		517	3.6
z13DQDU-1	zircon	115.9	9.27	328.1	155.2	0.7	363.8	0.47	160.7	2.85	0.70	38.23		101.4	1.4
z13DQDU-3	zircon	183.5	14.68	59.0	33.3	0.5	66.6	0.56	52.8	6.86	0.79	56.20		210.6	2.6
z13DQDU-4	zircon	348.9	27.91	69.0	24.7	0.8	74.6	0.36	107.8	3.96	0.75	46.01		1137	13
z13DQDU-7	zircon	203.8	16.31	120.2	40.0	1.0	129.4	0.33	112.5	5.97	0.78	52.95		1158	10
z13DQDU-10	zircon	526.5	42.12	88.9	50.5	0.5	100.6	0.57	225.4	4.36	0.76	48.66		1924.8	7.5
z13DQDU-19	zircon	1408.8	112.71	47.5	27.4	1.9	53.8	0.58	363.7	5.68	0.78	53.22		1795.4	6.1
z13DQDU-34	zircon	78.8	6.30	433.6	118.5	3.3	460.9	0.27	141.1	2.51	0.72	40.14		2080	11
z13DQDU-36	zircon	489.1	39.13	89.3	57.5	1.0	102.6	0.64	205.0	3.28	0.73	43.41		1875	13
z13DQDU-37	zircon	398.3	31.86	317.4	159.4	2.3	354.1	0.50	562.9	2.63	0.72	41.17		1102.5	8.5
z13DQDU-40	zircon	419.8	33.58	277.1	100.5	1.3	300.3	0.36	477.8	2.07	0.68	35.67		1627.9	8.7
z13DQDU-42	zircon	392.3	31.38	88.5	38.8	1.2	97.5	0.44	145.5	2.18	0.69	36.32		1118	10
z13DQDU-44	zircon	391.5	31.32	181.0	160.2	1.4	217.9	0.88	361.0	4.96	0.76	49.94		391.8	3.7
z13DQDU-47	zircon	309.1	24.73	326.0	15.5	0.3	329.6	0.05	452.3	7.99	0.80	58.83		304.8	3.3
z13DQDU-48	zircon	394.9	31.60	159.0	91.8	2.0	180.2	0.58	283.1	2.65	0.72	40.97		601.9	7.1
z13DQDU-51	zircon	231.0	18.48	272.2	87.5	1.2	292.4	0.32	258.6	2.08	0.70	37.66		447.9	6
z13DQDU-54	zircon	272.3	21.79	102.4	51.9	0.7	114.3	0.51	124.7	3.19	0.73	42.63		1061	15

z13DQDU-59	zircon	1416.3	113.30	32.3	18.7	0.5	36.6	0.58	236.4	3.78	0.74	45.63		2711.2	6.5
z13DQDU-62	zircon	313.6	25.08	143.9	28.1	1.4	150.4	0.20	180.3	1.98	0.69	36.69		484.1	6.4
z13DQDU-64	zircon	94.9	7.59	194.1	121.1	0.9	222.0	0.62	83.9	3.13	0.73	43.55		103.3	1.2
z13DQDU-71	zircon	262.7	21.02	241.3	85.1	1.3	260.9	0.35	254.1	1.81	0.68	34.67		429.8	3.5
z13DQDU-83	zircon	95.2	7.61	155.7	59.2	0.5	169.3	0.38	61.6	2.32	0.70	38.48		92.3	1.4
z13DQDU-91	zircon	234.2	18.74	140.9	59.6	1.5	154.7	0.42	155.1	6.09	0.78	53.32		227.7	3
z13DQDU-98	zircon	599.3	47.94	94.8	89.8	2.0	115.5	0.95	284.7	3.15	0.73	43.70		1167	12
z13DQDU-118	zircon	278.5	22.28	122.6	63.7	1.6	137.3	0.52	148.7	2.36	0.71	39.27		2712.4	9.9

Table 3b: Zircon (U-Th)/He Ages And Isotopic Data: Chapters 2 and 3

Table 3b: Price River Canyon, UT

Reduced (U-Th[Sm])/He Data															
Sample	**mineral**	**Age, Ma**	**err., Ma**	**U (ppm)**	**Th (ppm)**	**147Sm (ppm)**	**[U]e**	**Th/U**	**He (nmol/g)**	**mass (ug)**	**Ft**	**ESR**		**Best age**	**error**
z13pruc-01	zircon	236.19	18.90	187.23	143.60	0.48	220.28	0.77	205.46	2.89	0.72	41.62		577.2	4.6
z13pruc-04	zircon	126.35	10.11	53.34	32.92	1.58	60.92	0.62	30.98	3.35	0.74	44.72		1683	23
z13pruc-07	zircon	290.23	23.22	159.56	101.56	1.73	182.95	0.64	206.74	2.57	0.71	39.51		448.1	4.6
z13pruc-09	zircon	140.20	11.22	67.61	33.00	0.59	75.21	0.49	39.49	1.88	0.69	36.45		1720.3	8.5
z13pruc-14	zircon	274.27	21.94	46.58	32.03	1.72	53.96	0.69	59.22	3.24	0.73	42.78		1086	12
z13pruc-15	zircon	279.64	22.37	441.18	156.18	0.77	477.14	0.35	517.36	2.16	0.71	38.65		2487.9	4.9
z13pruc-20	zircon	324.83	25.99	103.62	33.76	0.52	111.39	0.33	157.81	6.38	0.79	55.53		1100	12
z13pruc-21	zircon	267.16	21.37	143.34	47.96	1.44	154.39	0.33	170.56	3.85	0.75	46.69		427	11
z13pruc-22	zircon	177.47	14.20	57.79	33.47	0.76	65.50	0.58	48.69	5.11	0.77	50.38		1069	12
z13pruc-27	zircon	397.21	31.78	402.96	15.36	0.97	406.50	0.04	638.13	2.28	0.71	38.76		412.9	3.2
z13pruc-36	zircon	120.21	9.62	221.97	81.64	1.01	240.76	0.37	114.32	3.03	0.73	41.94		1464	8.8
z13pruc-38	zircon	74.21	5.94	611.37	101.85	1.80	634.82	0.17	189.41	4.12	0.74	44.15		980.7	7.7
z13pruc-55	zircon	227.53	18.20	62.36	36.26	0.51	70.71	0.58	61.59	2.18	0.70	38.13		1467	13
z13pruc-62	zircon	168.46	13.48	62.64	49.53	1.14	74.04	0.79	50.06	3.41	0.73	44.20		1756	11
z13pruc-70	zircon	292.07	23.37	61.54	28.44	0.78	68.09	0.46	81.81	4.30	0.75	45.96		1047	11
z13pruc-73	zircon	71.09	5.69	351.33	136.67	4.17	382.81	0.39	115.44	6.20	0.78	53.84		1093.8	8.8
z13pruc-85	zircon	400.24	32.02	223.12	102.13	2.10	246.64	0.46	421.27	5.57	0.77	50.50		443.7	3.4
z13pruc-89	zircon	131.82	10.55	27.35	35.19	1.31	35.46	1.29	17.92	2.33	0.70	39.48		1055	14
z13pruc-94	zircon	388.40	31.07	169.03	145.74	1.89	202.59	0.86	309.29	2.65	0.71	40.11		1890	6
z13pruc-95	zircon	199.52	15.96	974.65	220.38	1.16	1025.39	0.23	846.32	4.08	0.76	47.21		1164	15
z13pruc-100	zircon	303.89	24.31	369.39	52.80	0.76	381.55	0.14	484.29	4.38	0.76	47.20		1969.5	7.4
z13pruc-117	zircon	212.37	16.99	207.32	133.25	0.87	238.00	0.64	202.03	3.52	0.73	43.11		523	5.2
z13pruc-118	zircon	327.67	26.21	85.29	37.50	0.45	93.93	0.44	120.45	2.49	0.71	39.44		1965	14
z11UPR01-6	zircon	132.49	10.60	98.91	37.32	0.39	107.50	0.38	56.97	3.09	0.73	43.45		1646.7	6.5
z11UPR01-10	zircon	217.87	17.43	63.40	50.54	1.00	75.03	0.80	59.03	1.44	0.66	33.51		1674	14
z11UPR01-11	zircon	92.41	7.39	129.62	47.24	1.01	140.50	0.36	45.96	1.32	0.65	32.06		1487	12

z11UPR01-14	zircon	116.46	9.32	441.84	172.20	1.67	481.49	0.39	228.03	4.28	0.75	45.93		447	5
z11UPR01-15	zircon	162.71	13.02	138.44	43.71	0.61	148.50	0.32	87.28	1.46	0.66	33.11		2199	11
z11UPR01-17	zircon	201.67	16.13	184.77	90.14	0.55	205.53	0.49	161.63	2.85	0.71	40.05		330.1	3.5
z11UPR01-21	zircon	214.12	17.13	88.12	63.25	1.31	102.69	0.72	77.69	1.36	0.65	31.94		1528	14
z11UPR01-22	zircon	218.37	17.47	233.09	81.33	1.93	251.82	0.35	206.99	2.07	0.69	36.21		1399	15
z11UPR01-26	zircon	84.02	6.72	116.75	63.66	4.95	131.43	0.55	41.84	2.40	0.70	37.94		1509	11
z11UPR01-28	zircon	332.80	26.62	173.56	77.50	0.95	191.40	0.45	251.06	2.46	0.71	40.17		407.3	3.4
z11UPR01-36	zircon	148.52	11.88	56.53	18.20	0.64	60.72	0.32	33.61	1.73	0.68	35.70		2738.9	7.4
z11UPR01-38	zircon	417.42	33.39	75.56	62.37	0.39	89.92	0.83	158.40	4.57	0.76	49.12		535.9	7
z11UPR01-49	zircon	145.35	11.63	277.85	32.51	0.98	285.33	0.12	152.58	1.58	0.68	34.12		430.7	3.8
z11UPR01-51	zircon	79.66	6.37	111.42	69.57	0.53	127.44	0.62	37.09	1.68	0.67	34.84		1681	10
z11UPR01-54	zircon	239.37	19.15	84.21	35.89	0.62	92.48	0.43	88.68	3.24	0.73	42.79		1254.3	9.9
z11UPR01-60	zircon	116.99	9.36	92.14	54.90	1.50	104.78	0.60	44.96	1.63	0.67	34.95		2260.9	8.2
z11UPR01-65	zircon	154.53	12.36	105.19	103.68	1.58	129.07	0.99	77.17	2.67	0.71	40.12		429.5	4.7
z11UPR01-66	zircon	83.25	6.66	359.26	128.43	0.42	388.83	0.36	117.14	1.57	0.67	33.69		90.8	1.4
z11UPR01-69	zircon	102.83	8.23	186.20	41.70	0.76	195.80	0.22	79.91	3.07	0.73	42.33		1290	13
z11UPR01-77	zircon	223.06	17.84	188.63	32.97	1.01	196.23	0.17	165.68	1.86	0.69	36.26		1947.1	6.7
z11UPR01-78	zircon	400.87	32.07	185.90	12.80	0.62	188.85	0.07	325.88	5.20	0.77	50.65		1159.7	8.9
z11UPR01-80	zircon	134.73	10.78	217.16	132.80	0.64	247.74	0.61	128.79	2.59	0.71	39.57		1620.8	7
z11UPR01-84	zircon	190.76	15.26	162.68	71.52	0.82	179.15	0.44	126.60	1.77	0.68	35.17		1847.2	9.9
z11UPR01-89	zircon	99.79	7.98	50.77	25.22	0.52	56.58	0.50	20.74	1.70	0.68	35.01		2734.6	8.1
z11UPR01-98	zircon	333.83	26.71	236.01	66.38	0.66	251.29	0.28	320.81	1.86	0.69	36.79		1513.8	5.9
z11UPR01-107	zircon	161.32	12.91	314.81	121.13	0.90	342.69	0.38	188.00	0.99	0.62	29.35		240.2	2.6
z11UPR01-117	zircon	79.63	6.37	65.55	41.40	0.68	75.08	0.63	21.31	1.47	0.66	32.97		449.9	5
z11UPR01-121	zircon	241.50	19.32	65.99	53.40	1.30	78.29	0.81	65.92	1.28	0.64	31.07		529.5	8.1
z11UPR02-1	zircon	135.12	10.81	30.97	22.99	0.52	36.27	0.74	17.46	1.53	0.65	32.84		1363	17
z11UPR02-2	zircon	316.32	25.31	128.69	72.63	1.09	145.41	0.56	186.76	3.25	0.74	44.10		1782.6	5.2
z11UPR02-9	zircon	398.78	31.90	131.29	44.21	0.74	141.47	0.34	215.99	1.99	0.69	36.61		1195.3	8.8
z11UPR02-13	zircon	226.96	18.16	170.36	91.82	2.71	191.51	0.54	159.99	1.81	0.67	34.62		1438	12
z11UPR02-15	zircon	93.09	7.45	311.16	72.89	0.86	327.94	0.23	111.70	1.58	0.67	34.25		1068	14
z11UPR02-21	zircon	190.35	15.23	188.77	82.85	0.99	207.84	0.44	147.05	1.72	0.68	35.44		1341.5	9.8
z11UPR02-25	zircon	225.74	18.06	161.96	88.76	1.42	182.40	0.55	158.43	2.15	0.70	38.59		1591	51
z11UPR02-29	zircon	93.32	7.47	40.81	26.27	0.61	46.86	0.64	16.65	2.22	0.70	38.50		1761.1	8.9

z11UPR02-31	zircon	297.45	23.80	235.61	61.68	1.31	249.82	0.26	279.95	1.82	0.69	35.63		1745.9	6.7
z11UPR02-32	zircon	212.61	17.01	94.79	22.66	0.79	100.01	0.24	84.93	2.86	0.73	42.21		1353	11
z11UPR02-41	zircon	213.61	17.09	299.88	132.30	1.26	330.34	0.44	266.19	1.98	0.69	36.61		1790	19
z11UPR02-43	zircon	291.87	23.35	205.37	104.45	0.75	229.42	0.51	257.40	2.27	0.70	38.01		426.7	6.4
z11UPR02-44	zircon	297.19	23.78	131.25	43.76	2.35	141.33	0.33	161.80	2.23	0.70	37.83		488.4	4.9
z11UPR02-51	zircon	353.90	28.31	102.47	173.60	3.23	142.45	1.69	180.13	1.55	0.65	32.82		549	11
z11UPR02-54	zircon	86.23	6.90	340.14	254.71	0.59	398.78	0.75	128.90	2.12	0.69	37.16		74.6	4
z11UPR02-60	zircon	893.89	71.51	58.29	37.92	0.57	67.02	0.65	249.16	2.80	0.72	41.69		2460.4	9
z11UPR02-79	zircon	215.15	17.21	526.94	141.68	7.56	559.60	0.27	460.39	2.00	0.70	37.51		1002	12
z11UPR02-81	zircon	396.22	31.70	104.93	54.88	1.88	117.57	0.52	174.62	1.87	0.68	35.18		1016	12
z11UPR02-83	zircon	314.05	25.12	221.92	203.78	1.21	268.84	0.92	329.93	3.01	0.71	40.07		1596.3	6.9
z11UPR02-85	zircon	349.19	27.94	106.25	118.88	1.49	133.62	1.12	171.18	1.60	0.66	34.40		1700	16
z11UPR02-87	zircon	277.71	22.22	89.60	20.48	0.20	94.31	0.23	98.41	1.67	0.68	35.44		1795.7	9
z11UPR02-90	zircon	91.84	7.35	495.75	135.43	3.35	526.95	0.27	172.77	1.43	0.66	32.49		1753.7	8.9
z11UPR02-91	zircon	341.89	27.35	110.21	31.08	0.46	117.36	0.28	168.87	4.23	0.76	48.42		1805	12
z11UPR02-98	zircon	326.73	26.14	96.05	51.64	0.81	107.94	0.54	131.51	1.96	0.68	35.16		583.4	6.3
z11UPR02-104	zircon	257.34	20.59	94.19	67.68	1.28	109.78	0.72	107.27	2.12	0.69	37.36		1030.1	6.5
z11UPR02-110	zircon	123.02	9.84	192.17	41.84	0.81	201.80	0.22	92.22	1.97	0.68	35.31		1027	11
z11UPR02-112	zircon	86.87	6.95	46.57	35.23	0.49	54.68	0.76	17.20	1.62	0.67	34.25		2699.7	8.5
z11UPR02-113	zircon	191.21	15.30	249.31	42.70	1.57	259.15	0.17	177.73	1.44	0.66	32.15		415	15
z11UPR02-114	zircon	249.93	19.99	140.79	46.45	0.51	151.48	0.33	140.32	1.56	0.68	34.69		2779.5	5
z11UPR03-3	zircon	475.19	38.02	131.49	73.66	2.02	148.46	0.56	305.41	5.92	0.77	52.28		1712	18
z11UPR03-7	zircon	445.44	35.63	317.39	127.41	1.82	346.72	0.40	682.79	7.94	0.79	56.60		1092	18
z11UPR03-28	zircon	249.25	19.94	345.36	127.14	2.03	374.63	0.37	395.26	5.72	0.77	50.88		332.1	5.6
z11UPR03-29	zircon	1077.92	86.23	61.84	37.07	0.54	70.37	0.60	343.69	5.50	0.77	50.60		1626	20
z11UPR03-26	zircon	162.10	12.97	63.63	60.74	0.74	77.62	0.95	53.63	5.98	0.78	54.35		367.9	8
z11UPR03-22	zircon	441.72	35.34	413.73	320.90	3.27	487.62	0.78	880.37	3.31	0.73	44.14		1461	28
z11UPR03-24	zircon	383.13	30.65	228.14	162.20	3.11	265.50	0.71	415.29	3.57	0.74	44.44		404.8	7.1
z11UPR03-34	zircon	269.13	21.53	172.11	88.80	1.15	192.56	0.52	216.82	4.90	0.76	48.93		635	14
z11UPR03-36	zircon	1321.26	105.70	50.90	61.16	2.01	64.99	1.20	406.54	8.00	0.78	55.77		3601	15
z11UPR03-37	zircon	249.46	19.96	285.83	93.64	0.60	307.39	0.33	309.82	3.44	0.74	43.58		1064	17
z11UPR03-38	zircon	496.73	39.74	45.26	26.28	1.45	51.32	0.58	112.02	6.78	0.78	54.89		1055	17
z11UPR03-53	zircon	453.96	36.32	137.92	95.64	0.87	159.94	0.69	308.88	5.43	0.76	49.77		422.1	9.6

z11UPR03-59	zircon	452.96	36.24	142.77	38.18	0.96	151.57	0.27	294.47	5.24	0.77	50.07		1061	19
z11UPR03-62	zircon	394.44	31.56	208.60	47.54	8.88	219.59	0.23	352.21	2.96	0.73	42.73		1045	19
z11UPR03-64	zircon	370.81	29.66	99.86	49.79	0.64	111.32	0.50	175.25	5.12	0.77	50.09		579.9	9.7
z11UPR03-79	zircon	312.25	24.98	324.87	188.07	0.91	368.17	0.58	476.64	4.25	0.75	47.13		341.1	5.2
z11UPR03-97	zircon	1125.45	90.04	198.48	53.27	0.58	210.74	0.27	1031.99	3.06	0.73	42.95		1050	14
z11UPR03-115	zircon	342.54	27.40	265.94	206.53	1.81	313.49	0.78	435.26	3.44	0.73	43.97		328.3	7
z11UPR03-121	zircon	157.81	12.62	87.81	62.70	12.89	102.31	0.71	65.38	3.99	0.74	45.39		1523	24
z11UPR04-06	zircon	195.53	15.64	33.57	30.65	3.33	40.64	0.91	27.23	1.23	0.63	30.26		571	15
z11UPR04-12	zircon	491.31	39.30	113.74	22.93	2.30	119.03	0.20	212.97	1.33	0.65	31.89		1716	18
z11UPR04-13	zircon	349.53	27.96	61.62	35.17	4.68	69.74	0.57	90.47	1.75	0.67	34.69		2129	22
z11UPR04-17	zircon	302.12	24.17	163.17	78.84	4.43	181.34	0.48	201.79	1.62	0.67	34.21		485.5	9.3
z11UPR04-18	zircon	332.78	26.62	108.73	38.13	2.94	117.52	0.35	146.20	1.74	0.68	34.98		1563	30
z11UPR04-19	zircon	279.65	22.37	142.68	53.40	10.10	155.02	0.37	142.89	0.91	0.60	27.35		605	10
z11UPR04-21	zircon	333.29	26.66	104.93	38.17	3.33	113.73	0.36	139.86	1.85	0.67	33.96		1797	18
z11UPR04-26	zircon	289.07	23.13	95.03	54.07	4.52	107.50	0.57	111.47	1.36	0.65	32.47		2694	11
z11UPR04-28	zircon	406.24	32.50	71.91	34.63	3.31	79.90	0.48	115.86	1.24	0.64	31.53		1619	22
z11UPR04-37	zircon	558.30	44.66	68.74	32.58	2.88	76.26	0.47	163.52	1.78	0.69	36.17		1072	21
z11UPR04-39	zircon	99.43	7.95	58.62	19.37	3.87	63.10	0.33	21.36	1.06	0.63	29.51		2850	16
z11UPR04-47	zircon	225.08	18.01	270.86	171.48	8.02	310.38	0.63	254.56	2.17	0.67	33.97		338.1	6.7
z11UPR04-50	zircon	172.90	13.83	176.15	199.21	9.09	222.05	1.13	133.49	1.24	0.64	31.38		1655	14
z11UPR04-57	zircon	169.88	13.59	111.36	72.37	5.51	128.04	0.65	81.86	2.05	0.69	36.94		1470	26
z11UPR04-59	zircon	283.92	22.71	168.51	199.26	10.01	214.43	1.18	211.25	1.13	0.63	30.92		617	11
z11UPR04-64	zircon	631.38	50.51	110.60	27.52	3.27	116.95	0.25	259.88	0.94	0.63	29.33		1054	21
z11UPR04-65	zircon	273.27	21.86	86.43	74.36	3.39	103.56	0.86	109.07	2.42	0.70	38.84		425.4	7.6
z11UPR04-73	zircon	421.76	33.74	232.43	171.89	14.06	272.07	0.74	435.30	1.90	0.68	36.35		415.2	7.5
z11UPR04-76	zircon	90.82	7.27	153.69	86.75	5.74	173.69	0.56	53.91	1.07	0.63	30.12		1091	17
z11UPR04-82	zircon	348.97	27.92	145.59	42.58	4.49	155.41	0.29	215.23	2.73	0.72	40.44		375.6	6.7
z11UPR04-93	zircon	153.92	12.31	130.71	77.19	4.34	148.50	0.59	74.85	0.94	0.60	27.67		1508	18
z11UPR05-X	NO DATA: ZIRCON GRAINS SMALLER THAN < 40 um														

z11UPR06-3	zircon	310.10	24.81	89.06	72.06	0.84	105.66	0.81	135.99	4.29	0.75	47.68		1780	12
z11UPR06-4	zircon	78.23	6.26	204.86	54.53	1.09	217.42	0.27	66.04	2.58	0.72	40.03		623.8	9.1
z11UPR06-9	zircon	428.55	34.28	67.36	10.54	1.34	69.79	0.16	120.28	2.62	0.72	40.84		1061	11
z11UPR06-10	zircon	369.66	29.57	80.72	38.58	0.55	89.60	0.48	135.59	3.48	0.74	44.51		1594	17
z11UPR06-13	zircon	324.74	25.98	129.44	48.71	0.75	140.66	0.38	188.43	4.04	0.75	45.81		655.9	5.8
z11UPR06-17	zircon	82.69	6.62	230.07	110.01	0.91	255.40	0.48	82.96	2.85	0.72	41.77		98	2
z11UPR06-19	zircon	284.86	22.79	104.89	32.93	0.25	112.47	0.31	120.46	1.79	0.68	35.66		411.2	5.1
z11UPR06-20	zircon	79.64	6.37	160.04	94.64	5.05	181.85	0.59	57.92	3.41	0.74	44.24		1676.8	9.1
z11UPR06-22	zircon	329.04	26.32	72.16	29.56	0.46	78.97	0.41	103.40	2.69	0.72	41.20		2608.1	7.6
z11UPR06-23	zircon	333.27	26.66	113.49	41.57	0.77	123.06	0.37	169.37	3.80	0.75	45.85		1676	11
z11UPR06-28	zircon	223.41	17.87	148.62	55.35	1.44	161.37	0.37	148.65	4.15	0.75	46.83		2605.8	6.5
z11UPR06-33	zircon	282.44	22.59	117.51	71.13	0.98	133.88	0.61	147.61	2.44	0.71	39.78		1067	11
z11UPR06-38	zircon	91.68	7.33	129.93	36.12	0.90	138.25	0.28	51.49	3.82	0.75	45.77		1699.8	8.9
z11UPR06-53	zircon	125.44	10.04	232.50	31.14	1.00	239.68	0.13	124.58	4.40	0.76	48.06		1703.4	9.4
z11UPR06-55	zircon	81.87	6.55	451.21	160.12	0.87	488.08	0.35	156.77	2.98	0.72	41.40		80.9	4.5
z11UPR06-62	zircon	323.09	25.85	105.58	85.84	2.02	125.35	0.81	155.78	2.18	0.70	38.29		1786	10
z11UPR06-65	zircon	318.15	25.45	59.61	33.87	2.77	67.42	0.57	86.47	3.64	0.73	43.15		1027	15
z11UPR06-67	zircon	299.88	23.99	94.46	64.89	0.95	109.40	0.69	126.10	2.14	0.70	38.22		2722	11
z11UPR06-69	zircon	79.85	6.39	138.70	66.89	0.40	154.10	0.48	50.04	3.89	0.75	46.45		94.2	1.8
z11UPR06-76	zircon	347.19	27.77	78.70	47.61	0.60	89.66	0.61	122.03	2.45	0.71	39.77		1655	17
z11UPR06-77	zircon	139.55	11.16	160.22	61.09	1.07	174.29	0.38	93.27	2.21	0.70	38.53		2198	10
z11UPR06-79	zircon	354.10	28.33	101.50	80.31	1.04	119.99	0.79	174.76	3.82	0.74	45.85		437.1	4.7
z11UPR06-93	zircon	183.36	14.67	196.87	48.42	0.87	208.02	0.25	155.16	4.22	0.74	44.94		463	10
z11UPR06-102	zircon	214.56	17.16	33.84	27.88	0.98	40.27	0.82	34.88	3.63	0.74	44.62		493.2	7.9
z11UPR06-114	zircon	340.03	27.20	268.18	156.84	5.41	304.32	0.58	402.55	2.22	0.70	38.99		1730.1	7.8
z11UPR06-120	zircon	418.04	33.44	130.65	50.44	0.49	142.27	0.39	235.11	2.33	0.71	39.71		625.8	6.7
z11UPR07-6	zircon	128.10	10.25	37.80	18.66	1.02	42.10	0.49	18.92	1.29	0.64	31.54		1016	14
z11UPR07-9	zircon	293.05	23.44	178.34	59.51	1.37	192.05	0.33	225.66	3.04	0.73	42.23		1242	9.4
z11UPR07-12	zircon	171.06	13.68	180.62	49.27	1.11	191.97	0.27	118.13	1.38	0.66	32.68		1846	52
z11UPR07-15	zircon	125.91	10.07	105.10	57.37	0.50	118.30	0.55	62.95	5.65	0.78	52.62		2053	10
z11UPR07-20	zircon	176.77	14.14	62.88	41.59	0.53	72.46	0.66	47.81	1.90	0.68	36.20		1670.7	9.5
z11UPR07-24	zircon	172.43	13.79	134.17	73.30	1.49	151.05	0.55	91.87	1.21	0.65	31.78		917	15
z11UPR07-27	zircon	184.11	14.73	131.96	74.24	3.84	149.07	0.56	95.32	1.09	0.64	30.77		2792.2	6.1

z11UPR07-28	zircon	92.58	7.41	50.52	41.51	0.57	60.08	0.82	21.16	2.16	0.70	38.63		1426	14
z11UPR07-31	zircon	131.68	10.53	154.09	74.76	2.88	171.31	0.49	80.77	1.33	0.66	32.89		435.6	6.3
z11UPR07-32	zircon	102.14	8.17	90.40	37.90	0.78	99.12	0.42	36.48	1.43	0.66	33.38		1045	10
z11UPR07-45	zircon	121.36	9.71	134.63	162.91	1.99	172.14	1.21	70.51	1.08	0.62	29.83		1638.9	7.5
z11UPR07-50	zircon	141.90	11.35	77.02	34.81	0.82	85.04	0.45	43.65	1.51	0.66	33.55		2669	9
z11UPR07-52	zircon	150.22	12.02	190.74	66.70	1.17	206.10	0.35	114.95	1.74	0.68	35.41		1310.5	9.4
z11UPR07-55	zircon	540.14	43.21	79.41	21.79	0.31	84.43	0.27	164.48	1.46	0.65	31.22		1735	77
z11UPR07-56	zircon	91.89	7.35	153.96	68.42	0.51	169.71	0.44	53.19	1.10	0.63	29.84		93.2	1.5
z11UPR07-57	zircon	300.88	24.07	60.39	42.80	1.50	70.25	0.71	76.00	1.58	0.65	32.76		2723.7	9.8
z11UPR07-70	zircon	203.60	16.29	183.08	62.99	1.91	197.59	0.34	128.25	0.77	0.58	25.98		283	32
z11UPR07-72	zircon	111.84	8.95	271.73	135.34	4.62	302.91	0.50	117.70	1.17	0.64	30.97		1020	32
z11UPR07-75	zircon	126.38	10.11	229.17	155.63	2.98	265.01	0.68	114.32	1.10	0.63	30.06		559.8	5.2
z11UPR07-76	zircon	195.91	15.67	178.10	66.62	0.80	193.45	0.37	141.09	1.69	0.68	35.44		1632	16
z11UPR07-80	zircon	276.28	22.10	240.22	170.78	1.20	279.54	0.71	275.56	1.31	0.65	32.34		1314.3	9
z11UPR07-89	zircon	627.03	50.16	50.23	15.30	0.49	53.75	0.30	121.49	1.14	0.64	30.87		556	21
z11UPR07-95	zircon	113.81	9.10	219.65	72.69	3.21	236.40	0.33	96.53	1.33	0.66	32.86		1710.1	9.5
z11UPR07-96	zircon	187.06	14.96	73.90	79.90	1.23	92.30	1.08	59.99	1.19	0.64	31.27		614	13
z11UPR07-100	zircon	121.24	9.70	66.17	37.32	1.03	74.77	0.56	31.13	1.10	0.63	30.30		1197	16
z11UPR07-106	zircon	185.34	14.83	66.01	26.53	0.68	72.12	0.40	45.49	0.99	0.62	29.34		2747	13
z11UPR07-114	zircon	704.33	56.35	46.48	25.33	0.79	52.31	0.55	136.01	1.42	0.65	32.52		875	26
z11UPR07-115	zircon	185.47	14.84	27.29	28.62	2.21	33.89	1.05	21.91	1.22	0.64	31.45		2979.8	7.8
z11UPR07-116	zircon	186.69	14.94	121.61	118.22	1.96	148.84	0.97	97.07	1.27	0.64	31.53		1492	14
z11UPR07-118	zircon	248.79	19.90	19.97	16.51	1.14	23.77	0.83	20.52	1.08	0.63	30.76		2662	33
zPanther-02	zircon	339.02	27.12	74.39	55.08	1.53	87.08	0.74	119.80	3.32	0.73	44.09		503.1	5.6
zPanther-05	zircon	118.97	9.52	164.89	97.72	2.68	187.40	0.59	82.54	1.89	0.68	35.70		1682	14
zPanther-07	zircon	407.55	32.60	76.75	26.30	1.53	82.81	0.34	137.29	3.30	0.73	42.99		2867	13
zPanther-08	zircon	368.70	29.50	242.55	195.68	4.40	287.62	0.81	422.68	2.76	0.72	41.73		576.3	5
zPanther-11	zircon	283.55	22.68	254.46	156.58	4.88	290.53	0.62	331.95	3.11	0.73	43.48		384.5	4
zPanther-15	zircon	149.90	11.99	71.44	75.18	4.50	88.77	1.05	52.07	2.70	0.72	41.43		1615	22
zPanther-31	zircon	263.39	21.07	170.76	81.75	5.12	189.60	0.48	192.25	2.37	0.70	38.28		418.6	4.5
zPanther-46	zircon	227.83	18.23	147.90	90.21	6.10	168.70	0.61	144.24	1.83	0.68	36.33		1895	28
zPanther-48	zircon	129.03	10.32	257.40	153.36	6.35	292.74	0.60	139.32	1.75	0.68	35.35		1042	11
zPanther-52	zircon	554.41	44.35	53.32	49.03	5.97	64.64	0.92	143.26	2.88	0.71	40.75		975	11

zPanther-55	zircon	317.98	25.44	198.10	36.06	8.28	206.44	0.18	257.90	2.45	0.71	39.27		373.3	4.8
zPanther-59	zircon	90.20	7.22	61.47	31.44	1.79	68.72	0.51	24.97	3.95	0.74	45.06		1573	24
zPanther-60	zircon	206.63	16.53	202.91	46.60	4.77	213.66	0.23	168.16	2.12	0.70	37.09		923	7.2
zPanther-64	zircon	308.52	24.68	123.13	60.24	2.21	137.01	0.49	180.57	5.49	0.77	52.03		1691	12
zPanther-65	zircon	851.27	68.10	37.04	15.89	1.79	40.71	0.43	139.01	2.26	0.70	37.87		970	12
zPanther-67	zircon	169.31	13.54	102.68	75.96	1.93	120.18	0.74	79.31	2.62	0.71	40.60		500.2	5.8
zPanther-73	zircon	225.75	18.06	88.88	48.91	2.38	100.15	0.55	88.50	2.55	0.71	40.39		583.6	9
zPanther-76	zircon	260.08	20.81	161.03	86.09	3.90	180.87	0.53	180.72	2.34	0.70	38.19		404.1	4.6
zPanther-90	zircon	375.53	30.04	209.49	114.02	6.69	235.77	0.54	331.34	1.97	0.68	35.19		1664	16
zPanther-96	zircon	107.49	8.60	99.42	56.09	3.92	112.35	0.56	46.95	2.58	0.71	40.51		1730	16
zPanther-103	zircon	152.97	12.24	119.63	45.57	8.17	130.16	0.38	77.61	2.60	0.71	40.15		1786	12
zPanther-120	zircon	189.21	15.14	68.04	105.73	20.41	92.48	1.55	64.16	1.69	0.67	35.25		2482	22

Table 3b: North San Rafael Swell, UT

Reduced (U-Th[Sm])/He Data															
Sample	**mineral**	**Age, Ma**	**err., Ma**	**U (ppm)**	**Th (ppm)**	**147Sm (ppm)**	**[U]e**	**Th/U**	**He (nmol/g)**	**mass (ug)**	**Ft**	**ESR**		**Best age**	**error**
z11UCCR04-4	zircon	290.73	23.26	32.12	31.04	0.89	39.27	0.97	43.11	2.25	0.69	36.92		1682.00	17.00
z11UCCR04-6	zircon	159.16	12.73	205.56	72.31	0.99	222.21	0.35	146.55	4.51	0.76	48.29		1753.40	9.20
z11UCCR04-8	zircon	972.64	77.81	38.76	24.52	0.68	44.41	0.63	184.66	3.58	0.73	44.02		376.90	4.70
z11UCCR04-10	zircon	380.61	30.45	60.53	24.42	0.75	66.15	0.40	100.44	3.11	0.72	41.04		1078.30	9.30
z11UCCR04-14	zircon	151.15	12.09	94.11	52.45	1.12	106.19	0.56	64.98	4.67	0.74	45.23		1070.10	7.30
z11UCCR04-15	zircon	194.50	15.56	27.34	21.66	0.70	32.33	0.79	25.97	4.79	0.75	48.14		1066.00	13.00
z11UCCR04-17	zircon	132.83	10.63	99.81	69.02	0.63	115.71	0.69	58.75	2.46	0.70	38.73		988.40	8.70
z11UCCR04-19	zircon	189.47	15.16	73.44	62.35	0.87	87.80	0.85	69.44	4.71	0.76	49.99		2807.00	5.90
z11UCCR04-22	zircon	359.26	28.74	73.81	54.70	0.63	86.40	0.74	125.56	3.50	0.73	43.50		613.80	8.90
z11UCCR04-24	zircon	265.31	21.23	93.10	31.37	1.00	100.33	0.34	111.16	4.88	0.76	48.26		1776.00	6.90
z11UCCR04-30	zircon	151.64	12.13	100.12	65.74	1.44	115.26	0.66	73.51	5.43	0.77	51.55		1473.90	7.40
z11UCCR04-34	zircon	316.95	25.36	188.04	185.62	1.40	230.77	0.99	286.71	2.78	0.71	40.45		635.20	5.90
z11UCCR04-36	zircon	154.77	12.38	113.34	63.68	1.49	128.01	0.56	83.54	5.55	0.77	51.82		1443.00	14.00
z11UCCR04-40	zircon	299.56	23.96	185.28	101.99	0.54	208.76	0.55	258.70	5.13	0.75	46.88		610.00	7.70
z11UCCR04-42	zircon	121.68	9.73	130.43	75.03	2.08	147.71	0.58	67.30	2.40	0.69	36.67		1434.00	14.00
z11UCCR04-49	zircon	335.71	26.86	76.67	34.92	0.63	84.71	0.46	120.36	4.76	0.77	49.92		1094.60	9.30

z11UCCR04-51	zircon	433.70	34.70	31.25	18.73	0.33	35.56	0.60	66.65	5.97	0.78	52.65		1465.00	15.00
z11UCCR04-54	zircon	144.42	11.55	163.49	56.07	1.05	176.40	0.34	101.73	3.39	0.73	43.04		1099.00	8.50
z11UCCR04-64	zircon	413.90	33.11	32.42	13.21	0.58	35.47	0.41	58.54	2.88	0.72	40.74		1073.00	16.00
z11UCCR04-66	zircon	305.49	24.44	68.21	53.15	1.33	80.45	0.78	95.28	2.41	0.70	39.14		2684.80	5.20
z11UCCR04-72	zircon	368.89	29.51	73.02	37.05	0.75	81.55	0.51	131.56	6.49	0.79	55.87		2476.00	7.10
z11UCCR04-80	zircon	117.44	9.40	33.44	28.08	0.64	39.91	0.84	19.27	4.67	0.75	48.26		1074.00	12.00
z11UCCR04-83	zircon	683.55	54.68	96.21	63.70	1.63	110.88	0.66	318.85	3.48	0.74	45.30		1458.00	11.00
z11UCCR04-84	zircon	312.35	24.99	47.80	15.42	0.11	51.35	0.32	68.24	4.93	0.77	50.80		2073.60	6.70
z11UCCR04-85	zircon	148.78	11.90	42.31	12.45	1.90	45.19	0.29	27.16	3.64	0.74	44.44		1677.00	14.00
z11UCCR04-92	zircon	289.76	23.18	280.53	162.59	0.69	317.96	0.58	387.85	5.18	0.76	49.85		294.40	3.40
z11UCCR04-99	zircon	330.27	26.42	52.06	34.54	0.69	60.01	0.66	77.58	2.73	0.71	39.82		481.30	5.60
z11UCCR04-101	zircon	686.66	54.93	54.89	46.78	1.63	65.67	0.85	193.41	4.52	0.75	48.44		2128.10	8.50
z11UCCR04-107	zircon	144.54	11.56	233.83	146.63	1.39	267.59	0.63	161.16	4.80	0.76	49.91		1188.10	6.60
z11UCCR04-108	zircon	83.80	6.70	113.37	90.95	5.11	134.34	0.80	43.73	2.74	0.71	40.86		1231.00	21.00
z11UCCR04-110	zircon	147.43	11.79	192.24	28.62	0.86	198.83	0.15	121.07	4.47	0.76	47.32		1695.00	10.00
z11UCCR04-112	zircon	135.27	10.82	236.64	246.21	14.33	293.39	1.04	146.45	1.83	0.68	35.77		433.80	4.90
z11UCCR04-121	zircon	220.01	17.60	71.83	31.46	0.63	79.08	0.44	70.32	3.25	0.74	44.15		2722.10	8.00
z11UCCF03-01	zircon	162.38	12.99	132.09	50.89	1.18	143.81	0.39	83.67	1.45	0.66	32.65		560.90	6.30
z11UCCF03-02	zircon	216.75	17.34	214.34	101.17	1.82	237.63	0.47	180.54	1.33	0.64	31.10		630.50	8.20
z11UCCF03-03	zircon	291.53	23.32	35.74	10.85	0.39	38.24	0.30	43.24	2.17	0.71	38.49		1044.00	12.00
z11UCCF03-05	zircon	296.47	23.72	296.64	64.35	1.14	311.45	0.22	304.91	0.87	0.60	27.10		1737.80	6.20
z11UCCF03-07	zircon	138.98	11.12	120.58	53.54	0.30	132.91	0.44	61.75	0.95	0.61	28.58		91.80	1.40
z11UCCF03-10	zircon	123.49	9.88	175.66	72.66	1.89	192.40	0.41	86.39	2.03	0.67	33.96		85.60	3.20
z11UCCF03-21	zircon	142.44	11.40	189.92	72.03	1.31	206.51	0.38	106.01	1.41	0.66	33.15		1084.00	12.00
z11UCCF03-29	zircon	574.47	45.96	142.73	74.60	1.73	159.91	0.52	325.92	1.15	0.63	30.55		1013.60	7.30
z11UCCF03-41	zircon	291.72	23.34	199.42	89.09	0.67	219.93	0.45	230.04	1.27	0.65	32.25		554.70	4.60
z11UCCF03-43	zircon	190.55	15.24	84.95	39.90	0.62	94.14	0.47	67.51	1.83	0.69	36.58		581.20	8.70
z11UCCF03-55	zircon	92.89	7.43	344.15	117.86	0.49	371.28	0.34	119.38	1.17	0.64	30.56		82.10	5.40
z11UCCF03-58	zircon	97.48	7.80	543.09	321.13	0.74	617.02	0.59	203.50	0.97	0.62	29.55		93.80	1.10
z11UCCF03-68	zircon	236.36	18.91	102.48	28.10	0.83	108.96	0.27	102.90	2.80	0.73	42.15		1000.00	8.80
z11UCCF03-81	zircon	391.53	31.32	134.38	50.14	0.38	145.93	0.37	187.28	0.75	0.59	26.79		1991.00	24.00
z11UCCF03-84	zircon	259.60	20.77	230.83	39.16	2.11	239.86	0.17	208.73	0.82	0.61	27.85		1834.20	6.90
z11UCCF03-91	zircon	403.01	32.24	404.56	123.46	1.18	432.98	0.31	662.29	1.72	0.69	35.75		1229.40	9.50

z11UCCF03-107	zircon	220.94	17.68	106.65	36.22	0.96	114.99	0.34	88.21	1.05	0.64	30.28		1774.00	10.00
z11UCCF03-115	zircon	86.85	6.95	457.72	233.20	0.51	511.40	0.51	153.36	1.14	0.64	30.68		83.70	3.30
z13EMERY-06	zircon	189.48	15.16	176.43	85.15	7.68	196.07	0.48	130.66	1.20	0.64	31.43		1645.00	16.00
z13EMERY-10	zircon	165.25	13.22	73.31	76.84	4.35	91.02	1.05	51.89	1.18	0.63	30.87		1637.00	22.00
z13EMERY-11	zircon	163.21	13.06	186.05	38.27	8.33	194.91	0.21	108.68	0.98	0.63	29.26		417.90	8.80
z13EMERY-14	zircon	236.33	18.91	164.87	112.89	4.62	190.88	0.68	166.42	1.77	0.67	34.94		1022.00	13.00
z13EMERY-16	zircon	488.06	39.04	77.33	43.93	4.79	87.46	0.57	150.46	1.07	0.63	30.56		1644.00	18.00
z13EMERY-20	zircon	347.70	27.82	133.20	25.11	2.77	138.99	0.19	179.44	1.48	0.67	33.97		703.30	9.60
z13EMERY-24	zircon	113.07	9.05	220.42	116.16	2.91	247.18	0.53	89.23	0.70	0.59	26.52		1958.00	21.00
z13EMERY-26	zircon	248.16	19.85	465.28	148.15	4.65	499.40	0.32	389.96	0.66	0.58	25.29		1059.00	10.00
z13EMERY-35	zircon	384.33	30.75	215.57	76.63	15.98	233.30	0.36	308.38	0.96	0.62	29.18		1429.00	18.00
z13EMERY-38	zircon	161.47	12.92	61.87	49.16	5.87	73.21	0.79	39.03	0.87	0.61	28.26		1590.00	23.00
z13EMERY-40	zircon	246.30	19.70	64.43	40.25	4.29	73.72	0.62	57.86	0.72	0.58	26.23		2110.00	17.00
z13EMERY-42	zircon	164.15	13.13	26.96	46.20	4.50	37.61	1.71	21.03	1.14	0.62	30.43		2718.00	23.00
z13EMERY-45	zircon	197.23	15.78	60.47	34.72	1.98	68.47	0.57	46.02	1.03	0.62	29.62		592.30	8.20
z13EMERY-46	zircon	155.67	12.45	199.02	71.84	7.68	215.59	0.36	111.80	0.93	0.61	28.21		1097.00	12.00
z13EMERY-59	zircon	204.85	16.39	173.74	51.60	6.27	185.65	0.30	121.49	0.65	0.59	25.98		1493.00	18.00
z13EMERY-62	zircon	251.46	20.12	147.92	77.62	8.64	165.83	0.52	143.96	1.07	0.63	30.12		601.70	5.40
z13EMERY-66	zircon	353.80	28.30	174.21	84.45	4.42	193.67	0.48	220.90	0.70	0.59	26.31		599.90	6.90
z13EMERY-70	zircon	319.40	25.55	118.05	50.37	10.06	129.70	0.43	124.70	0.51	0.55	23.64		2662.00	14.00
z13EMERY-72	zircon	343.67	27.49	95.09	36.74	3.66	103.57	0.39	116.81	0.84	0.60	26.99		544.30	9.30
z13EMERY-75	zircon	248.35	19.87	178.38	55.44	7.90	191.18	0.31	152.18	0.78	0.59	26.05		1981.00	14.00
z13EMERY-91	zircon	76.47	6.12	85.15	75.57	6.28	102.57	0.89	23.25	0.65	0.55	23.98		91.80	3.00
z13EMERY-106	zircon	424.48	33.96	37.63	23.04	2.50	42.94	0.61	60.22	0.82	0.60	27.40		1470.00	42.00
z11UCCF04-3	zircon	92.33	7.39	91.45	39.95	1.75	100.66	0.44	32.09	1.21	0.64	30.56		974.00	13.00
z11UCCF04-4	zircon	296.99	23.76	88.29	29.44	0.95	95.07	0.33	95.61	1.06	0.62	28.60		548.90	5.60
z11UCCF04-6	zircon	191.84	15.35	65.03	49.57	1.26	76.45	0.76	53.01	1.51	0.66	33.65		1799.00	10.00
z11UCCF04-9	zircon	89.13	7.13	447.48	196.29	1.11	492.67	0.44	162.18	1.82	0.68	35.44		94.00	1.00
z11UCCF04-12	zircon	86.33	6.91	223.13	131.49	0.92	253.40	0.59	70.83	0.85	0.60	27.30		88.40	1.30
z11UCCF04-31	zircon	413.48	33.08	232.82	52.70	0.44	244.95	0.23	387.12	1.78	0.69	36.09		992.70	7.10
z11UCCF04-33	zircon	76.45	6.12	205.77	98.17	0.42	228.38	0.48	62.39	1.60	0.66	32.98		91.60	1.30

z11UCCF04-37	zircon	2924.42	233.95	67.62	34.21	0.92	75.50	0.51	1092.84	0.85	0.60	27.19		2850.70	8.30
z11UCCF04-42	zircon	1049.69	83.98	24.71	7.99	0.24	26.55	0.32	99.88	0.94	0.62	28.80		2699.00	16.00
z11UCCF04-43	zircon	967.81	77.42	32.93	24.05	28.95	38.61	0.73	148.60	1.85	0.69	36.77		1069.70	7.50
z11UCCF04-44	zircon	296.22	23.70	154.18	145.05	2.31	187.58	0.94	181.63	1.01	0.59	27.55		421.90	3.70
z11UCCF04-67	zircon	193.88	15.51	178.41	203.05	3.39	225.17	1.14	138.59	0.78	0.58	26.59		684.90	7.10
z11UCCF04-76	zircon	205.45	16.44	211.66	80.20	1.21	230.13	0.38	160.02	0.91	0.62	28.94		461.30	4.60
z11UCCF04-79	zircon	198.50	15.88	113.26	18.32	0.78	117.48	0.16	82.86	1.27	0.65	31.45		414.70	6.50
z11UCCF04-80	zircon	250.72	20.06	30.40	32.08	0.71	37.79	1.06	32.30	1.08	0.62	29.92		2657.00	10.00
z11UCCF04-90	zircon	151.45	12.12	87.86	30.24	1.49	94.83	0.34	53.13	1.63	0.68	35.08		1638.00	13.00
z11UCCF04-97	zircon	100.32	8.03	0.52	0.58	0.10	0.66	1.11	0.23	1.08	0.63	30.76		1490.10	8.80
z11UCCF04-101	zircon	145.05	11.60	39.24	22.72	1.01	44.48	0.58	22.48	1.31	0.64	31.15		1487.00	16.00
z11UCCF04-106	zircon	268.57	21.49	230.07	114.83	3.69	256.52	0.50	242.03	1.17	0.64	31.09		612.10	9.30
z11UCCF04-107	zircon	179.38	14.35	59.53	15.34	0.66	63.06	0.26	41.64	1.51	0.67	34.34		1773.00	14.00
z11UCCF04-111	zircon	156.63	12.53	30.50	32.85	0.71	38.06	1.08	20.79	1.24	0.64	31.60		444.60	6.50
z11UCCF04-118	zircon	629.34	50.35	24.90	31.27	1.02	32.10	1.26	70.21	1.08	0.62	29.95		1117.00	23.00

Table 3b: Sunnyside Canyon, UT

Reduced (U-Th[Sm])/He Data															
Sample	**mineral**	**Age, Ma**	**err., Ma**	**U (ppm)**	**Th (ppm)**	**147Sm (ppm)**	**[U]e**	**Th/U**	**He (nmol/g)**	**mass (ug)**	**Ft**	**ESR**		**Best age**	**error**
z11USS01-1	zircon	239.29	19.14	119.10	11.78	0.50	121.82	0.10	118.50	4.61	0.74	43.79		428.40	5.20
z11USS01-4	zircon	133.55	10.68	786.08	947.37	6.67	1004.20	1.21	538.44	4.49	0.73	44.88		382.00	12.00
z11USS01-6	zircon	291.32	23.31	26.58	17.01	0.80	30.50	0.64	36.49	3.74	0.75	46.02		546.10	8.70
z11USS01-8	zircon	336.87	26.95	78.76	50.14	0.46	90.30	0.64	123.77	3.28	0.74	44.30		1853.00	12.00
z11USS01-13	zircon	373.56	29.88	50.22	29.85	2.21	57.10	0.59	87.07	3.45	0.74	44.30		566.50	9.10
z11USS01-14	zircon	323.81	25.91	38.08	12.91	0.77	41.05	0.34	59.05	8.12	0.80	59.90		974.00	19.00
z11USS01-15	zircon	230.91	18.47	69.21	22.54	0.38	74.40	0.33	70.70	3.93	0.75	46.34		1925.00	16.00
z11USS01-17	zircon	68.86	5.51	435.07	135.26	1.30	466.21	0.31	129.65	4.25	0.75	45.21		87.40	4.00
z11USS01-19	zircon	183.35	14.67	311.73	39.69	0.62	320.87	0.13	238.35	3.31	0.74	44.00		1005.00	11.00
z11USS01-20	zircon	152.71	12.22	161.61	56.18	0.82	174.54	0.35	106.28	3.09	0.73	42.79		1090.00	18.00
z11USS01-21	zircon	381.32	30.51	67.52	38.37	1.34	76.36	0.57	114.10	2.41	0.71	39.42		1655.50	9.50

z11USS01-25	zircon	196.78	15.74	367.52	178.24	1.62	408.55	0.48	341.37	5.70	0.78	52.46		433.60	3.80
z11USS01-28	zircon	122.83	9.83	127.28	67.06	0.66	142.72	0.53	71.74	4.18	0.75	47.06		1627.30	9.90
z11USS01-35	zircon	90.22	7.22	280.23	113.62	0.61	306.39	0.41	114.24	5.05	0.76	48.78		96.60	1.40
z11USS01-37	zircon	125.40	10.03	524.04	224.83	1.44	575.80	0.43	292.71	4.48	0.74	45.45		153.00	7.30
z11USS01-38	zircon	186.48	14.92	40.05	24.57	0.43	45.71	0.61	36.55	6.20	0.78	54.80		2700.20	7.40
z11USS01-40	zircon	552.61	44.21	65.94	23.28	0.53	71.30	0.35	177.67	8.48	0.80	58.85		1801.00	14.00
z11USS01-44	zircon	116.48	9.32	89.77	55.85	1.33	102.63	0.62	46.90	2.85	0.72	41.57		1131.00	11.00
z11USS01-45	zircon	206.54	16.52	178.98	97.58	1.15	201.45	0.55	169.27	3.79	0.74	45.38		1034.00	21.00
z11USS01-47	zircon	84.72	6.78	231.40	117.74	0.62	258.50	0.51	92.66	6.12	0.78	53.36		84.80	2.00
z11USS01-48	zircon	221.70	17.74	719.92	455.02	2.60	824.67	0.63	731.65	3.51	0.73	43.17		236.00	5.60
z11USS01-49	zircon	207.28	16.58	202.21	60.13	1.54	216.06	0.30	173.15	2.39	0.71	38.73		391.00	13.00
z11USS01-58	zircon	146.51	11.72	95.71	30.05	1.03	102.64	0.31	59.06	3.35	0.72	40.94		1688.00	14.00
z11USS01-74	zircon	558.74	44.70	203.98	60.65	2.93	217.95	0.30	514.35	3.99	0.75	46.31		1835.00	16.00
z11USS01-76	zircon	203.72	16.30	336.13	148.73	1.58	370.38	0.44	286.21	2.26	0.69	37.18		556.00	10.00
z11USS01-83	zircon	299.56	23.97	51.57	11.50	0.24	54.21	0.22	66.30	3.28	0.74	44.19		2739.00	25.00
z11USS01-87	zircon	86.99	6.96	290.12	118.97	1.15	317.52	0.41	111.83	4.51	0.75	45.62		95.10	1.40
z11USS01-93	zircon	91.29	7.30	522.75	228.17	1.27	575.28	0.44	205.18	3.18	0.72	41.00		92.40	1.80
z11USS01-104	zircon	80.01	6.40	545.28	232.38	0.78	598.77	0.43	186.83	3.01	0.72	40.85		89.00	1.40
z11USS01-114	zircon	437.03	34.96	71.31	38.04	1.00	80.07	0.53	142.24	3.37	0.73	43.06		1488.00	8.40
z11USS01-115	zircon	137.12	10.97	126.85	22.08	0.99	131.94	0.17	72.18	3.16	0.73	42.56		1456.00	14.00
z11USS01-122	zircon	98.66	7.89	257.65	78.13	0.52	275.64	0.30	116.40	8.46	0.79	55.15		97.40	1.30
z11USS02-16	zircon	90.82	7.27	163.63	58.04	0.86	176.99	0.35	64.02	3.29	0.73	43.19		1170.00	10.00
z11USS02-19	zircon	560.53	44.84	78.78	46.76	1.15	89.55	0.59	198.83	2.45	0.71	39.26		1706.00	10.00
z11USS02-20	zircon	143.16	11.45	82.78	59.62	1.15	96.51	0.72	51.55	1.99	0.68	36.42		2774.80	6.30
z11USS02-21	zircon	303.75	24.30	98.56	36.58	1.35	106.98	0.37	131.40	3.33	0.73	43.28		1139.00	14.00
z11USS02-29	zircon	130.62	10.45	184.07	180.90	1.84	225.73	0.98	121.29	4.49	0.75	48.33		1649.40	9.50
z11USS02-31	zircon	152.02	12.16	217.59	65.60	1.42	232.69	0.30	141.17	3.09	0.73	42.79		427.30	3.00
z11USS02-37	zircon	219.49	17.56	207.19	46.26	1.27	217.85	0.22	196.31	3.78	0.75	45.83		1733.00	5.90

z11USS02-42	zircon	232.10	18.57	129.24	34.72	0.68	137.24	0.27	130.28	3.69	0.75	45.28		1698.00	5.80
z11USS02-44	zircon	152.13	12.17	109.41	88.97	0.87	129.89	0.81	68.60	1.20	0.64	31.13		1590.50	9.70
z11USS02-45	zircon	246.49	19.72	164.21	132.85	1.10	194.80	0.81	189.42	2.75	0.72	41.47		2684.40	6.40
z11USS02-56	zircon	295.06	23.60	127.15	93.51	1.61	148.68	0.74	159.48	1.42	0.66	33.60		1715.50	7.90
z11USS02-64	zircon	220.92	17.67	229.04	37.83	1.34	237.76	0.17	218.91	4.22	0.76	47.95		423.50	3.50
z11USS02-72	zircon	83.10	6.65	253.11	107.49	0.46	277.86	0.42	95.50	5.26	0.76	49.03		90.20	1.20
z11USS02-73	zircon	122.81	9.82	265.17	107.86	0.79	290.00	0.41	142.96	3.54	0.74	44.05		437.20	7.20
z11USS02-74	zircon	185.38	14.83	31.88	20.33	0.53	36.56	0.64	27.45	3.77	0.74	45.09		2807.00	13.00
z11USS02-75	zircon	182.44	14.60	271.27	31.57	1.28	278.54	0.12	194.41	2.04	0.70	37.35		430.90	5.30
z11USS02-77	zircon	220.02	17.60	84.49	78.22	2.13	102.50	0.93	86.17	2.35	0.70	38.39		1140.00	18.00
z11USS02-79	zircon	242.75	19.42	106.13	73.31	0.79	123.01	0.69	119.59	3.54	0.73	43.17		1146.00	13.00
z11USS02-84	zircon	390.50	31.24	141.11	52.50	1.49	153.21	0.37	250.36	4.00	0.75	47.19		1979.50	6.00
z11USS02-87	zircon	450.99	36.08	59.42	49.16	0.69	70.74	0.83	132.14	3.78	0.74	45.92		3464.20	6.80
z11USS02-88	zircon	310.16	24.81	93.69	75.76	1.19	111.14	0.81	135.64	2.71	0.71	40.72		1051.00	10.00
z11USS02-92	zircon	108.46	8.68	352.04	72.86	0.84	368.82	0.21	155.24	2.36	0.71	39.62		2505.30	3.90
z11USS02-99	zircon	132.35	10.59	167.79	36.40	0.69	176.17	0.22	92.87	2.86	0.73	42.51		1781.80	6.40
z11USS02-101	zircon	159.49	12.76	163.82	81.56	0.63	182.60	0.50	110.64	2.16	0.70	37.69		2035.00	7.30
z11USS02-102	zircon	197.60	15.81	28.00	33.23	0.49	35.65	1.19	27.99	3.17	0.72	43.03		2750.00	25.00
z11USS02-103	zircon	598.43	47.87	98.50	54.58	1.29	111.07	0.55	260.58	2.11	0.70	37.91		1650.00	11.00
z11USS02-104	zircon	291.61	23.33	205.72	73.82	1.33	222.72	0.36	263.11	3.37	0.74	43.61		1721.00	7.10
z11USS02-105	zircon	669.75	53.58	45.86	24.70	2.00	51.56	0.54	138.95	2.56	0.71	39.90		1137.20	9.70
z11USS02-106	zircon	236.79	18.94	110.72	95.22	1.09	132.64	0.86	123.86	3.05	0.72	41.56		1949.00	12.00
z11USS02-110	zircon	165.58	13.25	96.86	79.31	0.99	115.13	0.82	77.59	3.79	0.74	46.22		1634.50	8.20
z11USS04-01	zircon	406.90	32.55	245.11	33.21	12.88	252.82	0.14	374.69	1.37	0.66	32.11		436.70	7.30
z11USS04-04	zircon	86.97	6.96	97.35	26.40	2.95	103.44	0.27	33.62	1.76	0.69	36.17		1776.00	20.00
z11USS04-07	zircon	190.74	15.26	298.76	129.76	5.45	328.66	0.43	226.18	1.53	0.66	33.11		1594.00	16.00
z11USS04-10	zircon	193.76	15.50	120.13	34.42	1.67	128.06	0.29	92.39	1.86	0.68	35.28		1868.00	15.00
z11USS04-14	zircon	629.39	50.35	66.88	49.84	1.04	78.36	0.75	167.52	1.00	0.61	28.31		398.80	5.60

z11USS04-17	zircon	732.20	58.58	18.23	11.52	3.87	20.91	0.63	60.61	2.15	0.70	37.98		1060.00	11.00
z11USS04-20	zircon	184.22	14.74	165.69	90.90	6.04	186.65	0.55	113.17	1.20	0.60	27.79		435.20	7.20
z11USS04-21	zircon	279.98	22.40	58.52	53.23	3.03	70.79	0.91	79.01	3.43	0.72	42.55		2639.00	25.00
z11USS04-26	zircon	271.90	21.75	304.15	96.26	12.20	326.38	0.32	285.96	0.68	0.59	26.24		1718.00	13.00
z11USS04-36	zircon	843.62	67.49	65.62	32.69	3.71	73.17	0.50	255.72	3.09	0.72	41.36		1892.00	14.00
z11USS04-41	zircon	208.50	16.68	327.20	121.05	7.24	355.10	0.37	248.70	1.01	0.62	28.51		1643.00	16.00
z11USS04-42	zircon	272.26	21.78	45.84	40.97	2.00	55.28	0.89	50.42	1.04	0.61	28.78		424.00	8.40
z11USS04-68	zircon	280.78	22.46	195.78	48.93	9.63	207.10	0.25	223.22	1.95	0.70	37.39		1596.00	15.00
z11USS04-118	zircon	311.49	24.92	304.93	47.86	3.82	315.96	0.16	346.61	1.09	0.64	30.40		1954.00	24.00
z11USS04-121	zircon	559.04	44.72	72.03	32.30	1.65	79.48	0.45	157.87	1.26	0.64	30.57		1491.00	18.00
z11USS05-1	zircon	130.93	10.47	361.57	98.93	0.75	384.35	0.27	197.13	3.26	0.72	40.66		163.20	2.30
z11USS05-8	zircon	152.10	12.17	176.49	65.53	0.77	191.58	0.37	101.22	1.15	0.64	30.62		369.20	3.90
z11USS05-10	zircon	176.59	14.13	254.88	96.33	1.55	277.06	0.38	174.88	1.44	0.66	32.41		1357.50	6.20
z11USS05-12	zircon	159.10	12.73	221.12	142.07	2.34	253.84	0.64	138.70	1.09	0.63	30.28		1082.40	6.00
z11USS05-13	zircon	293.01	23.44	167.97	86.12	0.48	187.80	0.51	214.70	2.76	0.71	39.50		1584.00	14.00
z11USS05-25	zircon	89.66	7.17	122.19	68.61	1.15	137.99	0.56	48.39	2.70	0.72	41.31		95.30	1.70
z11USS05-27	zircon	83.44	6.68	320.58	127.94	1.54	350.04	0.40	109.36	2.53	0.69	36.61		96.90	2.00
z11USS05-29	zircon	282.17	22.57	498.86	37.45	2.95	507.50	0.08	525.66	1.43	0.67	33.10		393.70	3.80
z11USS05-39	zircon	577.70	46.22	87.30	37.12	0.55	95.85	0.43	228.21	3.45	0.73	43.19		1403.00	11.00
z11USS05-41	zircon	127.19	10.18	110.53	12.90	0.44	113.50	0.12	55.62	2.25	0.71	38.43		961.00	16.00
z11USS05-46	zircon	86.97	6.96	113.18	34.14	0.48	121.04	0.30	37.87	1.83	0.66	33.13		76.90	1.50
z11USS05-54	zircon	93.21	7.46	242.52	135.81	0.69	273.79	0.56	97.55	2.27	0.70	38.80		89.30	1.00
z11USS05-55	zircon	237.78	19.02	247.38	28.42	1.93	253.93	0.11	229.63	2.13	0.69	36.42		396.50	4.70
z11USS05-59	zircon	799.53	63.96	60.02	22.01	0.57	65.09	0.37	211.46	2.31	0.71	39.38		1874.20	7.70
z11USS05-63	zircon	106.44	8.52	148.95	49.04	1.20	160.25	0.33	63.37	1.75	0.68	35.65		1781.80	6.60
z11USS05-66	zircon	441.08	35.29	164.43	40.52	1.28	173.76	0.25	307.26	2.51	0.72	40.68		2720.80	9.40
z11USS05-73	zircon	83.50	6.68	202.66	104.17	1.47	226.65	0.51	71.63	2.26	0.70	37.81		95.60	1.50
z11USS05-89	zircon	92.96	7.44	451.68	183.70	1.21	493.97	0.41	193.51	6.06	0.78	52.25		74.80	5.90

z11USS05-92	zircon	188.72	15.10	59.14	40.01	0.77	68.36	0.68	46.28	1.57	0.66	33.04		1938.50	8.30
z11USS05-93	zircon	529.44	42.36	100.69	51.76	0.33	112.61	0.51	242.65	3.04	0.73	42.33		426.40	3.90
z11USS05-96	zircon	95.21	7.62	452.95	248.30	0.74	510.11	0.55	184.36	2.41	0.70	38.07		88.50	2.20
z11USS05-109	zircon	248.47	19.88	269.44	99.28	1.00	292.30	0.37	301.08	4.45	0.75	47.37		2652.00	13.00
z11USS05-111	zircon	256.91	20.55	75.93	66.54	1.38	91.25	0.88	84.72	1.52	0.66	33.48		1653.00	11.00
z11USS05-117	zircon	252.64	20.21	31.39	39.73	1.25	40.54	1.27	39.68	2.75	0.70	39.83		1338.00	20.00
z11USS05-120	zircon	87.78	7.02	173.99	54.52	3.21	186.55	0.31	55.39	0.97	0.62	29.17		2431.00	10.00
z11USS06-03	zircon	118.97	9.52	84.08	73.33	5.34	100.99	0.87	39.84	0.92	0.61	28.66		2739.00	30.00
z11USS06-14	zircon	86.24	6.90	81.58	50.42	1.92	93.19	0.62	27.68	1.10	0.63	30.66		1632.00	17.00
z11USS06-18	zircon	181.04	14.48	92.16	33.51	1.49	99.88	0.36	63.95	1.41	0.65	31.64		1513.00	15.00
z11USS06-19	zircon	148.77	11.90	152.52	44.40	3.92	162.76	0.29	81.90	1.08	0.62	28.93		1726.00	17.00
z11USS06-20	zircon	233.10	18.65	333.70	117.72	7.93	360.83	0.35	290.61	1.15	0.63	29.96		356.20	5.00
z11USS06-21	zircon	281.78	22.54	127.13	65.89	-20.75	142.20	0.52	147.36	1.77	0.67	34.29		631.40	5.90
z11USS06-30	zircon	116.72	9.34	154.17	137.57	-29.48	185.69	0.89	74.36	1.14	0.63	30.62		1655.00	15.00
z11USS06-46	zircon	100.42	8.03	347.82	32.85	-24.45	355.26	0.09	131.43	1.55	0.68	34.42		1302.00	44.00
z11USS06-47	zircon	160.47	12.84	363.21	34.37	-48.37	370.88	0.09	183.84	0.74	0.57	24.31		558.30	4.50
z11USS06-48	zircon	96.87	7.75	43.27	10.08	-39.17	45.39	0.23	14.90	1.00	0.63	29.25		1087.00	12.00
z11USS06-52	zircon	104.85	8.39	50.79	45.52	-39.90	61.07	0.90	20.73	0.92	0.60	27.62		1149.00	19.00
z11USS06-61	zircon	178.99	14.32	183.51	16.98	-41.04	187.21	0.09	112.42	0.92	0.62	27.98		907.00	22.00
z11USS06-63	zircon	89.79	7.18	199.11	55.90	-40.67	211.77	0.28	62.55	0.88	0.61	27.65		1873.00	18.00
z11USS06-68	zircon	72.72	5.82	127.38	100.80	-23.48	150.47	0.79	38.64	1.62	0.65	32.55		76.40	2.40
z11USS06-69	zircon	194.70	15.58	31.27	55.92	-15.06	44.07	1.79	31.37	1.78	0.67	35.22		1821.00	23.00
z11USS06-71	zircon	86.62	6.93	100.19	46.28	-44.91	110.62	0.46	31.84	0.89	0.61	28.51		1521.00	16.00
z11USS06-72	zircon	223.94	17.92	120.01	103.95	-30.88	143.79	0.87	110.42	1.23	0.63	30.24		1139.50	7.20
z11USS06-82	zircon	106.07	8.49	41.11	21.52	31.52	46.22	0.52	16.53	1.00	0.62	29.14		1424.00	18.00
z11USS06-120	zircon	137.64	11.01	319.31	194.79	-21.94	364.04	0.61	174.90	1.17	0.64	31.33		480.70	3.30

z11USS07-1	zircon	844.63	67.57	52.76	36.28	1.56	61.12	0.69	228.91	5.92	0.77	51.19		1442.00	12.00
z11USS07-10	zircon	133.31	10.66	131.67	60.93	1.53	145.71	0.46	78.31	3.86	0.74	44.65		1093.50	9.70
z11USS07-11	zircon	314.39	25.15	287.07	98.56	4.64	309.78	0.34	387.70	2.61	0.72	41.21		1912.00	10.00
z11USS07-14	zircon	127.39	10.19	438.97	289.56	3.75	505.65	0.66	225.06	1.46	0.64	31.47		1431.80	6.50
z11USS07-16	zircon	75.16	6.01	248.66	213.98	1.12	297.93	0.86	83.61	2.24	0.69	36.97		75.40	1.20
z11USS07-18	zircon	628.20	50.26	60.41	41.65	1.50	70.01	0.69	192.61	5.46	0.77	52.40		2061.00	7.20
z11USS07-19	zircon	327.56	26.20	52.77	37.81	0.87	61.48	0.72	83.40	4.07	0.75	47.03		557.50	6.30
z11USS07-25	zircon	1179.95	94.40	79.40	31.59	1.29	86.68	0.40	454.15	4.14	0.74	45.24		1426.00	13.00
z11USS07-28	zircon	277.02	22.16	97.78	90.91	1.92	118.72	0.93	128.38	2.59	0.71	40.21		2652.70	4.60
z11USS07-33	zircon	128.56	10.28	229.61	72.03	1.36	246.20	0.31	133.41	5.66	0.77	51.60		1771.70	7.50
z11USS07-34	zircon	136.15	10.89	112.11	63.79	2.87	126.81	0.57	68.31	3.11	0.73	42.35		1466.00	10.00
z11USS07-35	zircon	101.68	8.13	132.06	40.19	1.03	141.32	0.30	59.37	4.70	0.76	48.36		1091.00	11.00
z11USS07-36	zircon	486.94	38.96	43.97	17.87	1.01	48.09	0.41	93.15	2.68	0.71	39.88		1452.00	17.00
z11USS07-37	zircon	120.75	9.66	287.46	138.58	6.65	319.39	0.48	157.72	4.28	0.75	46.88		1820.00	15.00
z11USS07-40	zircon	276.30	22.10	95.21	55.95	0.79	108.09	0.59	121.70	3.42	0.74	45.00		1119.20	7.20
z11USS07-43	zircon	261.23	20.90	45.62	23.80	0.73	51.10	0.52	56.82	5.55	0.77	52.07		1843.80	8.70
z11USS07-45	zircon	75.28	6.02	82.53	44.40	0.32	92.75	0.54	27.25	2.85	0.72	41.17		73.50	1.20
z11USS07-53	zircon	680.30	54.42	6.30	7.11	1.90	7.94	1.13	22.40	3.88	0.73	44.12		1069.00	14.00
z11USS07-61	zircon	158.57	12.69	157.39	109.69	1.19	182.65	0.70	121.59	5.33	0.77	51.18		2453.90	9.90
z11USS07-66	zircon	388.07	31.05	42.93	37.20	0.60	51.49	0.87	86.50	6.58	0.78	54.15		1842.00	12.00
z11USS07-69	zircon	117.25	9.38	84.41	24.41	0.97	90.03	0.29	44.86	7.36	0.78	53.27		1069.90	9.20
z11USS07-81	zircon	364.74	29.18	56.70	39.65	1.01	65.83	0.70	101.83	4.93	0.76	50.40		1490.00	14.00
z11USS07-83	zircon	117.61	9.41	107.15	43.47	0.74	117.16	0.41	55.36	3.36	0.74	44.21		1745.10	6.00
z11USS07-87	zircon	492.25	39.38	26.06	22.22	0.89	31.18	0.85	64.32	3.94	0.75	47.21		2071.00	10.00
z11USS07-89	zircon	152.14	12.17	75.96	39.54	0.63	85.06	0.52	52.55	3.59	0.74	45.59		2930.20	8.20
z11USS07-100	zircon	299.74	23.98	38.18	34.61	0.99	46.15	0.91	58.61	5.26	0.77	51.33		1929.80	8.90
z11USS07-102	zircon	63.24	5.06	124.46	76.80	0.62	142.15	0.62	33.48	1.99	0.69	36.57		75.40	1.50
z11USS07-104	zircon	184.25	14.74	180.77	75.55	1.31	198.17	0.42	146.99	4.06	0.74	43.91		1084.00	11.00
z11USS07-110	zircon	205.62	16.45	163.82	95.02	2.14	185.70	0.58	158.89	4.40	0.76	48.89		1875.00	25.00

Table 3b: Green River Canyon, UT

Reduced (U-Th[Sm])/He Data															
Sample	**mineral**	**Age, Ma**	**err., Ma**	**U (ppm)**	**Th (ppm)**	**147Sm (ppm)**	**[U]e**	**Th/U**	**He (nmol/g)**	**mass (ug)**	**Ft**	**ESR**		**Best age**	**error**
zBluecastle-06	zircon	171.57	13.73	87.02	38.75	6.00	95.97	0.45	67.41	3.77	0.75	46.43		1023.50	8.20
zBluecastle-07	zircon	73.50	5.88	260.68	48.73	1.92	271.91	0.19	77.86	2.43	0.72	40.26		1685.00	23.00
zBluecastle-11	zircon	345.17	27.61	306.85	210.80	2.65	355.39	0.69	489.95	3.11	0.72	41.99		329.20	6.20
zBluecastle-15	zircon	77.61	6.21	367.61	166.20	1.50	405.88	0.45	129.01	7.34	0.75	47.52		68.00	1.50
zBluecastle-18	zircon	214.44	17.16	114.61	59.39	-3.21	128.26	0.52	113.83	4.52	0.76	47.83		1427.00	35.00
zBluecastle-19	zircon	505.48	40.44	114.57	35.87	0.79	122.83	0.31	260.36	3.80	0.75	45.96		1027.00	16.00
zBluecastle-23	zircon	155.57	12.45	204.95	125.79	36.41	234.09	0.61	146.12	3.62	0.73	43.99		1784.00	16.00
zBluecastle-25	zircon	268.39	21.47	119.47	86.42	0.72	139.37	0.72	145.97	2.66	0.71	40.01		616.00	6.30
zBluecastle-26	zircon	284.31	22.74	134.68	57.94	0.91	148.02	0.43	176.69	5.13	0.76	49.15		301.10	4.10
zBluecastle-30	zircon	73.36	5.87	105.38	69.23	2.54	121.33	0.66	36.87	5.84	0.76	49.75		67.00	1.70
zBluecastle-44	zircon	79.11	6.33	420.53	108.15	42.24	445.63	0.26	151.09	7.73	0.79	55.56		343.90	3.50
zBluecastle-47	zircon	244.47	19.56	44.49	44.82	0.65	54.81	1.01	57.11	5.62	0.77	53.26		1793.00	15.00
zBluecastle-52	zircon	390.06	31.20	197.33	34.26	-0.23	205.22	0.17	334.83	4.84	0.75	46.50		461.30	9.70
zBluecastle-57	zircon	144.66	11.57	79.39	136.15	1.76	110.74	1.72	60.18	2.07	0.69	37.63		1170.00	17.00
zBluecastle-58	zircon	153.39	12.27	326.33	190.70	111.64	370.79	0.58	227.31	3.27	0.73	43.39		1697.00	13.00
zBluecastle-67	zircon	470.57	37.65	204.20	150.90	-6.55	238.90	0.74	452.11	2.73	0.72	41.86		1519.00	16.00
zBluecastle-74	zircon	297.58	23.81	213.13	269.28	1.91	275.13	1.26	333.72	4.10	0.74	45.60		625.90	6.10
zBluecastle-78	zircon	458.38	36.67	195.63	77.75	0.40	213.53	0.40	408.51	4.21	0.75	46.07		457.20	5.30
zBluecastle-82	zircon	276.75	22.14	116.60	69.12	-9.13	132.47	0.59	146.38	3.18	0.73	42.40		574.00	5.00
zBluecastle-90	zircon	151.67	12.13	68.36	31.82	0.27	75.69	0.47	43.76	2.10	0.70	38.02		2744.00	19.00
zBluecastle-94	zircon	184.35	14.75	160.21	22.84	-6.38	165.43	0.14	127.75	4.72	0.77	49.23		1446.00	15.00
zBluecastle-107	zircon	260.66	20.85	141.85	71.23	-10.98	158.19	0.50	162.73	2.95	0.72	41.00		429.90	4.10
zBluecastle-109	zircon	837.31	66.99	47.26	22.24	0.75	52.39	0.47	192.16	4.45	0.76	48.65		1841.00	44.00
zBluecastle-113	zircon	311.78	24.94	86.28	72.06	-10.20	102.82	0.84	128.79	3.17	0.73	43.22		562.60	8.40
zBluecastle-118	zircon	336.28	26.90	156.23	79.00	-4.89	174.39	0.51	245.90	4.57	0.76	48.49		1087.40	9.70
zBluecastle-119	zircon	275.37	22.03	439.37	144.95	1.16	472.74	0.33	537.51	3.86	0.75	46.36		1440.00	14.00
z13GRT04-02	zircon	87.13	6.97	85.93	27.11	4.32	92.20	0.32	32.34	3.71	0.74	44.58		1177.00	14.00
z13GRT04-07	zircon	393.84	31.51	54.50	17.61	2.32	58.56	0.32	99.65	6.00	0.78	52.45		2590.80	5.40

z13GRT04-10	zircon	243.81	19.50	63.11	22.70	4.08	68.35	0.36	67.06	3.58	0.73	43.17		1039.00	10.00
z13GRT04-14	zircon	353.03	28.24	122.06	54.05	3.93	134.52	0.44	187.92	2.66	0.72	40.44		416.20	2.90
z13GRT04-17	zircon	562.79	45.02	105.18	69.46	3.39	121.19	0.66	302.49	6.79	0.79	55.89		1929.50	4.70
z13GRT04-19	zircon	224.53	17.96	45.08	40.76	5.38	54.49	0.90	49.83	3.88	0.74	45.78		1064.00	11.00
z13GRT04-23	zircon	260.47	20.84	77.82	31.61	4.38	85.12	0.41	98.60	10.22	0.81	61.73		539.80	4.40
z13GRT04-25	zircon	1286.55	102.92	30.71	25.99	1.03	36.69	0.85	215.47	5.40	0.76	49.08		341.90	3.30
z13GRT04-34	zircon	370.64	29.65	58.41	47.43	2.01	69.34	0.81	112.36	6.91	0.79	56.40		1961.90	6.40
z13GRT04-35	zircon	791.54	63.32	93.30	53.99	6.88	105.76	0.58	365.51	4.77	0.76	49.13		1439.40	7.50
z13GRT04-36	zircon	146.50	11.72	185.59	113.93	5.82	211.84	0.61	125.56	3.71	0.74	45.27		1434.40	7.80
z13GRT04-41	zircon	297.03	23.76	57.69	36.39	1.79	66.08	0.63	88.25	10.87	0.81	64.57		1903.70	7.10
z13GRT04-43	zircon	115.01	9.20	284.16	49.58	4.26	295.59	0.17	140.65	4.91	0.76	48.07		1035.70	9.80
z13GRT04-45	zircon	111.74	8.94	332.04	81.22	13.02	350.81	0.24	155.71	3.11	0.73	42.41		1715.30	6.00
z13GRT04-54	zircon	148.63	11.89	318.68	97.20	7.75	341.09	0.31	213.10	6.13	0.77	50.79		1787.90	4.50
z13GRT04-59	zircon	189.67	15.17	101.08	102.26	34.37	124.79	1.01	100.20	6.19	0.77	52.53		273.00	17.00
z13GRT04-69	zircon	80.12	6.41	89.37	45.89	1.56	99.94	0.51	33.31	5.36	0.77	50.24		86.50	1.60
z13GRT04-74	zircon	206.67	16.53	127.27	60.27	3.86	141.16	0.47	122.75	5.06	0.77	50.58		1429.20	6.30
z13GRT04-88	zircon	399.90	31.99	72.08	73.53	6.37	89.04	1.02	147.70	4.16	0.75	46.89		1933.50	6.50
z13GRT04-91	zircon	179.69	14.37	96.90	56.09	4.60	109.83	0.58	79.71	3.48	0.74	44.66		1686.00	9.70
z13GRT04-119	zircon	458.68	36.69	35.26	22.32	2.11	40.41	0.63	77.88	4.44	0.75	47.60		660.90	6.80
z13GRT03-01	zircon	83.63	6.69	156.99	73.15	2.91	173.85	0.47	59.80	5.04	0.76	48.19		79.50	1.20
z13GRT03-02	zircon	233.79	18.70	157.14	66.09	3.72	172.37	0.42	167.07	4.32	0.76	47.66		365.90	3.70
z13GRT03-21	zircon	88.88	7.11	404.39	165.04	4.49	442.41	0.41	156.96	3.42	0.74	43.62		1735.70	5.30
z13GRT03-25	zircon	274.28	21.94	66.82	83.14	2.62	85.98	1.24	96.81	4.26	0.74	46.81		2731.90	5.80
z13GRT03-28	zircon	180.95	14.48	180.88	64.54	6.24	195.77	0.36	135.23	2.13	0.70	37.76		1440.20	7.90
z13GRT03-34	zircon	140.60	11.25	67.49	24.84	2.81	73.22	0.37	40.35	2.98	0.72	40.84		966.30	7.10
z13GRT03-35	zircon	97.90	7.83	85.37	50.43	4.43	97.00	0.59	39.02	4.42	0.76	48.05		1031.00	14.00
z13GRT03-36	zircon	162.53	13.00	128.68	48.36	4.03	139.83	0.38	88.92	3.12	0.72	40.50		456.20	4.60
z13GRT03-39	zircon	86.55	6.92	309.07	49.65	2.05	320.51	0.16	116.17	6.15	0.77	50.50		1396.00	5.80
z13GRT03-40	zircon	167.72	13.42	85.48	91.02	5.55	106.47	1.06	71.58	3.65	0.73	44.28		1638.30	7.30
z13GRT03-45	zircon	162.20	12.98	170.44	89.31	2.84	191.01	0.52	125.76	3.69	0.74	45.45		172.70	1.70
z13GRT03-50	zircon	304.42	24.35	217.47	59.25	1.25	231.12	0.27	310.20	7.80	0.80	58.23		1444.50	7.80
z13GRT03-53	zircon	716.62	57.33	89.01	33.84	4.26	96.82	0.38	287.62	3.28	0.73	42.35		1098.20	6.10
z13GRT03-54	zircon	601.82	48.15	80.10	32.33	4.82	87.56	0.40	217.90	3.48	0.73	43.27		1045.20	7.20

z13GRT03-64	zircon	150.68	12.05	214.97	74.69	12.13	232.23	0.35	138.49	3.24	0.73	41.86		1454.00	10.00
z13GRT03-67	zircon	241.04	19.28	371.75	17.83	0.51	375.85	0.05	395.30	6.86	0.80	56.03		574.00	3.50
z13GRT03-72	zircon	389.56	31.16	63.13	27.94	2.14	69.57	0.44	110.90	3.58	0.74	44.17		606.10	6.10
z13GRT03-77	zircon	172.09	13.77	77.77	45.08	2.49	88.16	0.58	59.22	2.80	0.71	40.51		2716.00	10.00
z13GRT03-105	zircon	83.56	6.68	159.70	36.77	3.10	168.18	0.23	58.07	4.28	0.76	48.41		480.50	3.20
z13GRT03-107	zircon	255.62	20.45	95.69	56.38	7.76	108.71	0.59	111.67	3.34	0.73	43.32		2005.70	8.20
z13GRT03-113	zircon	437.62	35.01	161.87	105.47	4.67	186.17	0.65	335.72	3.59	0.74	45.05		546.40	4.40
z13GRT03-114	zircon	528.33	42.27	42.81	28.35	2.15	49.35	0.66	112.86	5.52	0.77	51.71		1988.40	6.30
z13GRT02-02	zircon	125.67	10.05	111.32	35.46	7.00	119.52	0.32	63.59	5.67	0.78	52.47		1611.00	7.80
z13GRT02-05	zircon	249.99	20.00	131.92	54.12	-10.69	144.33	0.41	144.04	2.92	0.73	42.27		792.90	9.40
z13GRT02-11	zircon	590.11	47.21	55.58	37.60	-7.91	64.20	0.68	158.59	3.95	0.74	45.73		1877.00	18.00
z13GRT02-14	zircon	271.52	21.72	117.61	112.99	3.89	143.64	0.96	159.11	3.96	0.74	45.69		580.20	5.30
z13GRT02-23	zircon	243.86	19.51	372.77	117.53	27.42	399.96	0.32	390.84	3.03	0.73	42.52		648.20	6.10
z13GRT02-33	zircon	266.18	21.29	111.17	124.80	-9.69	139.85	1.12	140.14	2.42	0.68	36.93		626.40	9.00
z13GRT02-35	zircon	111.02	8.88	99.20	45.65	-10.82	109.65	0.46	47.64	2.79	0.72	41.12		1643.00	11.00
z13GRT02-38	zircon	136.98	10.96	73.68	43.93	-15.57	83.72	0.60	43.62	2.29	0.70	38.15		1065.00	13.00
z13GRT02-40	zircon	436.01	34.88	33.22	24.59	-4.64	38.86	0.74	73.16	5.53	0.77	52.83		1875.00	13.00
z13GRT02-46	zircon	216.73	17.34	74.34	60.39	0.00	88.24	0.81	78.03	3.86	0.74	46.08		1077.00	17.00
z13GRT02-62	zircon	481.21	38.50	108.65	81.98	-6.24	127.49	0.75	254.97	3.94	0.74	46.00		1818.30	7.30
z13GRT02-68	zircon	134.24	10.74	28.68	24.97	-7.49	34.39	0.87	18.54	3.73	0.74	44.77		452.20	9.80
z13GRT02-82	zircon	175.37	14.03	350.39	41.88	-5.77	360.00	0.12	261.00	4.06	0.76	47.05		1807.00	7.10
z13GRT02-87	zircon	176.59	14.13	64.59	29.41	-3.17	71.35	0.46	54.71	7.41	0.79	57.52		1023.00	13.00
z13GRT02-92	zircon	85.27	6.82	724.02	201.70	9.50	770.50	0.28	265.79	4.02	0.75	45.21		1790.40	5.60
z13GRT02-101	zircon	189.18	15.13	188.75	163.49	-9.90	226.33	0.87	169.64	3.05	0.72	42.49		463.80	5.10
z13GRT02-104	zircon	319.19	25.54	137.47	42.28	3.48	147.22	0.31	197.65	4.51	0.76	48.68		1360.00	15.00
z13GRT02-105	zircon	173.43	13.87	87.56	79.16	0.83	105.79	0.90	77.21	5.42	0.77	51.66		1108.10	8.20
z13GRT02-108	zircon	140.25	11.22	392.83	228.81	-13.63	445.43	0.58	240.01	2.37	0.70	39.06		420.90	7.70
z13GRT02-102	zircon	83.94	6.72	181.52	87.17	3.06	201.60	0.48	66.77	3.42	0.73	42.29		91.30	0.91
z13GRT01-01	zircon	293.54	23.48	113.94	46.77	4.48	124.73	0.41	160.96	8.73	0.80	58.15		991.60	6.50
z13GRT01-02	zircon	323.08	25.85	195.54	90.39	5.60	216.37	0.46	272.62	2.36	0.71	39.15		1812.80	7.90
z13GRT01-11	zircon	201.96	16.16	115.58	99.23	4.55	138.45	0.86	104.02	1.84	0.68	35.99		2725.40	5.10

z13GRT01-13	zircon	236.92	18.95	165.84	61.46	5.02	180.01	0.37	166.15	2.49	0.71	39.46		1449.90	7.30
z13GRT01-14	zircon	263.26	21.06	28.84	29.18	7.22	35.60	1.01	35.87	2.31	0.70	38.33		1656.00	12.00
z13GRT01-17	zircon	128.65	10.29	110.72	77.90	4.97	128.67	0.70	61.39	1.96	0.68	35.93		1556.20	7.90
z13GRT01-19	zircon	173.85	13.91	65.63	39.05	3.83	74.64	0.59	49.64	2.18	0.70	38.40		534.40	5.80
z13GRT01-20	zircon	253.31	20.26	107.96	82.42	5.57	126.96	0.76	125.81	2.75	0.71	40.42		2758.00	7.30
z13GRT01-23	zircon	390.46	31.24	125.58	70.70	3.36	141.88	0.56	212.84	2.28	0.69	37.41		418.40	3.70
z13GRT01-32	zircon	264.00	21.12	37.46	30.67	3.81	44.54	0.82	45.88	2.74	0.71	40.12		1099.00	10.00
z13GRT01-37	zircon	338.73	27.10	100.51	48.27	2.71	111.63	0.48	142.67	1.80	0.68	35.97		1657.70	7.70
z13GRT01-44	zircon	96.11	7.69	369.84	239.63	2.69	425.02	0.65	160.11	3.10	0.72	41.64		85.16	0.91
z13GRT01-47	zircon	140.37	11.23	76.68	45.42	6.54	87.17	0.59	47.79	2.66	0.72	40.81		1006.70	7.20
z13GRT01-57	zircon	281.62	22.53	478.93	176.30	4.84	519.54	0.37	553.17	1.87	0.69	36.27		300.40	2.20
z13GRT01-62	zircon	184.15	14.73	165.07	89.20	3.49	185.63	0.54	133.60	2.79	0.71	40.52		1642.40	6.90
z13GRT01-68	zircon	248.48	19.88	214.38	73.24	3.02	231.25	0.34	230.76	3.00	0.73	42.84		1472.00	8.30
z13GRT01-80	zircon	166.85	13.35	96.22	52.66	3.06	108.36	0.55	70.62	2.73	0.72	40.58		449.40	3.90
z13GRT01-83	zircon	392.50	31.40	178.54	54.28	4.67	191.06	0.30	277.40	1.79	0.67	33.74		1130.40	8.40
z13GRT01-106	zircon	220.23	17.62	419.98	111.52	5.05	445.68	0.27	361.45	1.79	0.67	34.19		205.10	1.70
z13GRT01-109	zircon	335.14	26.81	163.64	67.55	5.57	179.21	0.41	232.56	2.37	0.70	38.24		1647.20	8.20
z13GRT01-111	zircon	325.03	26.00	209.99	111.84	10.58	235.79	0.53	277.59	1.65	0.66	32.94		602.50	5.40
z13GRT01-115	zircon	398.75	31.90	315.31	114.26	6.08	341.64	0.36	587.69	5.97	0.78	52.22		1927.10	5.50
z13WSUN-1	zircon	230.05	18.40	165.40	66.54	1.42	180.73	0.40	170.85	3.94	0.75	46.32		455.50	4.50
z13WSUN-2	zircon	146.06	11.68	386.73	46.12	1.47	397.35	0.12	233.01	3.05	0.74	43.11		1006.90	6.20
z13WSUN-3	zircon	317.42	25.39	57.33	23.71	0.36	62.79	0.41	80.22	3.13	0.73	42.66		979.40	9.80
z13WSUN-4	zircon	240.21	19.22	76.94	17.82	0.22	81.05	0.23	82.59	5.04	0.77	51.00		236.00	4.20
z13WSUN-7	zircon	349.83	27.99	126.42	81.78	0.99	145.25	0.65	193.66	1.97	0.69	37.06		647.50	7.70
z13WSUN-9	zircon	272.43	21.79	99.47	65.93	1.24	114.65	0.66	127.03	3.38	0.74	44.89		2842.70	7.10
z13WSUN-20	zircon	94.31	7.54	364.23	202.56	1.00	410.87	0.56	145.23	1.95	0.69	36.88		77.90	4.00
z13WSUN-35	zircon	186.64	14.93	151.34	127.12	3.42	180.62	0.84	137.28	3.78	0.74	46.11		1725.00	11.00
z13WSUN-40	zircon	364.73	29.18	54.96	29.34	1.23	61.72	0.53	89.14	2.72	0.72	40.60		998.10	9.60
z13WSUN-43	zircon	186.41	14.91	482.04	120.05	1.65	509.68	0.25	363.20	2.03	0.70	37.62		1778.90	7.40
z13WSUN-46	zircon	395.13	31.61	103.21	110.63	0.82	128.68	1.07	204.48	3.06	0.72	42.87		2722.00	12.00
z13WSUN-47	zircon	110.54	8.84	358.01	257.17	1.28	417.22	0.72	189.00	4.60	0.75	47.67		483.50	4.80
z13WSUN-51	zircon	147.02	11.76	230.09	121.88	2.10	258.15	0.53	155.59	4.15	0.75	47.08		1751.00	18.00
z13WSUN-61	zircon	338.16	27.05	108.83	95.04	1.62	130.72	0.87	167.93	2.07	0.69	37.11		1580.50	8.50

z13WSUN-65	zircon	175.86	14.07	227.66	141.36	1.39	260.21	0.62	174.60	2.21	0.70	38.18		456.50	4.70
z13WSUN-67	zircon	212.12	16.97	56.88	38.08	0.92	65.65	0.67	54.56	2.74	0.72	40.77		1629.00	11.00
z13WSUN-92	zircon	96.15	7.69	257.14	92.73	3.03	278.50	0.36	103.56	2.40	0.71	39.67		1054.00	11.00
z13WSUN-116	zircon	225.24	18.02	262.30	339.04	1.62	340.35	1.29	279.46	1.73	0.66	34.56		255.50	2.20
z13WSUN-118	zircon	289.81	23.18	168.49	51.11	1.30	180.26	0.30	194.15	1.72	0.68	34.64		1536.20	7.80
zwken-03	zircon	297.89	23.83	481.15	166.55	15.55	519.56	0.35	584.66	1.83	0.69	36.05		316.70	2.20
zwken-04	zircon	292.11	23.37	336.60	45.33	1.92	347.05	0.13	423.04	4.22	0.76	47.17		996.60	5.70
zwken-05	zircon	243.03	19.44	193.65	93.95	3.49	215.30	0.49	199.47	2.03	0.70	37.48		1982.00	11.00
zwken-06	zircon	187.10	14.97	70.82	18.74	2.19	75.15	0.26	59.99	6.02	0.78	52.97		1143.00	11.00
zwken-17	zircon	115.43	9.23	169.40	62.55	3.16	183.81	0.37	78.53	2.24	0.68	35.36		1094.90	7.00
zwken-21	zircon	153.00	12.24	229.00	107.00	3.69	253.65	0.47	146.49	2.38	0.69	37.06		538.70	3.50
zwken-24	zircon	76.65	6.13	105.26	86.82	6.52	125.28	0.82	38.34	3.55	0.73	44.29		526.80	4.40
zwken-25	zircon	287.82	23.03	98.83	42.76	4.28	108.70	0.43	119.88	2.06	0.70	37.58		1518.00	13.00
zwken-29	zircon	114.57	9.17	534.34	38.68	14.97	543.32	0.07	234.51	1.84	0.69	36.18		983.90	6.70
zwken-31	zircon	80.08	6.41	597.53	145.22	8.55	631.00	0.24	187.99	2.32	0.69	35.74		1796.20	7.70
zwken-39	zircon	493.05	39.44	125.82	58.30	8.14	139.28	0.46	275.57	2.57	0.72	40.89		1522.10	8.50
zwken-47	zircon	200.07	16.01	178.41	60.47	7.73	192.37	0.34	147.07	2.14	0.70	37.69		451.50	4.00
zwken-60	zircon	126.27	10.10	377.22	26.77	6.89	383.42	0.07	190.42	2.72	0.72	40.56		1740.20	6.50
zwken-73	zircon	75.71	6.06	264.40	129.02	3.00	294.11	0.49	87.37	3.29	0.72	41.70		81.70	1.20
zwken-91	zircon	99.86	7.99	179.07	92.31	9.91	200.37	0.52	77.64	2.78	0.71	40.27		1682.00	7.20
zwken-92	zircon	145.75	11.66	254.22	83.33	4.94	273.43	0.33	155.34	2.45	0.72	40.11		2027.00	18.00
zwken-105	zircon	153.14	12.25	186.70	106.74	1.61	211.28	0.57	125.82	2.74	0.71	40.24		218.70	2.20
zwken-114	zircon	286.78	22.94	65.21	86.70	3.42	85.19	1.33	94.53	2.58	0.70	39.54		667.60	6.30
zwken-117	zircon	396.94	31.75	226.42	146.95	10.15	260.30	0.65	424.52	3.69	0.74	45.05		1644.00	11.00

Table 3b: Mount Garfield, CO

Reduced (U-Th[Sm])/He Data															
Sample	**mineral**	**Age, Ma**	**err., Ma**	**U (ppm)**	**Th (ppm)**	**147Sm (ppm)**	**[U]e**	**Th/U**	**He (nmol/g)**	**mass (ug)**	**Ft**	**ESR**		**Best age**	**error**
z13GJR01-1	zircon	78.19	6.25	300.79	114.52	0.82	327.16	0.38	94.56	2.36	0.68	35.48		79.30	0.96
z13GJR01-6	zircon	103.72	8.30	116.09	97.10	5.54	138.47	0.84	54.16	2.15	0.69	37.71		1707.00	11.00

z13GJR01-9	zircon	316.69	25.34	230.93	138.88	1.75	262.91	0.60	310.43	1.74	0.68	35.29		556.20	4.90
z13GJR01-24	zircon	151.07	12.09	351.60	41.80	1.09	361.22	0.12	207.35	2.28	0.70	36.91		639.00	10.00
z13GJR01-29	zircon	86.33	6.91	112.44	59.39	0.97	126.12	0.53	43.13	3.43	0.73	42.85		92.40	1.90
z13GJR01-38	zircon	290.18	23.21	317.25	25.94	5.56	323.25	0.08	369.59	2.35	0.72	39.47		1191.00	12.00
z13GJR01-40	zircon	238.45	19.08	229.11	47.01	1.92	239.94	0.21	224.65	2.89	0.72	39.91		434.70	3.40
z13GJR01-45	zircon	76.75	6.14	890.65	353.07	1.68	971.94	0.40	283.23	2.14	0.70	37.96		1686.30	8.50
z13GJR01-69	zircon	253.89	20.31	228.91	185.29	2.19	271.58	0.81	274.14	3.03	0.72	42.33		327.30	2.40
z13GJR01-74	zircon	246.10	19.69	334.75	120.55	3.39	362.52	0.36	347.79	2.62	0.71	39.45		1084.00	14.00
z13GJR01-76	zircon	89.92	7.19	374.82	144.46	1.11	408.08	0.39	130.57	1.50	0.66	32.47		102.60	1.10
z13GJR01-82	zircon	229.96	18.40	163.09	40.94	0.55	172.52	0.25	154.92	2.50	0.71	39.50		1051.30	5.80
z13GJR01-83	zircon	384.24	30.74	211.71	89.96	10.87	232.47	0.42	359.52	2.78	0.73	42.08		1470.00	19.00
z13GJR01-87	zircon	316.97	25.36	212.35	79.44	1.98	230.65	0.37	271.34	1.68	0.67	34.54		1676.00	14.00
z13GJR01-92	zircon	345.16	27.61	171.70	73.75	1.77	188.68	0.43	253.70	2.19	0.71	38.82		669.30	5.40
z13GJR01-102	zircon	184.98	14.80	190.46	75.13	0.64	207.76	0.39	141.96	1.73	0.68	34.88		1505.00	11.00
z13GJR01-113	zircon	347.48	27.80	61.06	38.16	1.34	69.85	0.63	92.54	2.07	0.69	37.08		1664.00	17.00
z13GJR01-115	zircon	459.52	36.76	43.08	59.68	1.63	56.82	1.39	103.85	2.72	0.71	41.37		2725.00	28.00
zGJCOCE01-01	zircon	253.99	20.32	76.89	35.75	7.44	85.16	0.46	79.85	1.82	0.67	34.58		1170.00	12.00
zGJCOCE01-10	zircon	125.99	10.08	298.41	120.85	4.75	326.25	0.40	140.94	1.09	0.63	29.98		2677.00	8.10
zGJCOCE01-12	zircon	292.76	23.42	30.79	23.72	2.32	36.26	0.77	40.37	2.24	0.69	37.33		473.70	6.70
zGJCOCE01-18	zircon	79.61	6.37	860.95	173.35	18.58	900.95	0.20	268.29	2.19	0.69	36.11		65.50	0.92
zGJCOCE01-35	zircon	149.58	11.97	180.16	67.75	5.10	195.79	0.38	108.15	1.63	0.68	35.00		1994.30	7.80
zGJCOCE01-36	zircon	496.46	39.72	138.93	62.77	5.21	153.41	0.45	256.26	1.00	0.61	27.85		1653.00	11.00
zGJCOCE01-37	zircon	519.77	41.58	84.37	42.43	3.02	94.15	0.50	184.56	1.72	0.68	34.95		1904.80	7.70
zGJCOCE01-41	zircon	125.31	10.02	33.61	24.83	2.79	39.34	0.74	19.12	2.61	0.71	40.30		1498.00	13.00
zGJCOCE01-43	zircon	274.49	21.96	124.52	78.98	3.15	142.71	0.63	146.97	1.98	0.68	36.08		554.10	5.60
zGJCOCE01-56	zircon	120.36	9.63	31.93	35.59	3.02	40.14	1.11	17.70	1.72	0.67	35.30		2077.40	9.90
zGJCOCE01-63	zircon	188.30	15.06	155.18	67.14	8.47	170.68	0.43	118.34	1.72	0.67	34.66		1058.40	9.50
zGJCOCE01-70	zircon	132.97	10.64	57.96	56.57	11.50	71.04	0.98	33.91	1.54	0.66	33.55		487.30	5.40
zGJCOCE01-80	zircon	319.21	25.54	22.54	13.01	1.97	25.55	0.58	31.44	2.11	0.70	38.21		1056.00	20.00
zGJCOCE01-83	zircon	338.13	27.05	147.65	44.64	3.64	157.94	0.30	208.85	2.29	0.71	38.97		1661.20	8.70
zGJCOCE01-102	zircon	215.04	17.20	82.56	33.94	6.99	90.41	0.41	73.16	1.94	0.69	36.31		1446.40	8.20
zGJCOCE01-106	zircon	142.24	11.38	63.65	36.84	1.63	72.14	0.58	38.38	1.92	0.69	36.45		1621.00	10.00
zGJCOCE01-110	zircon	329.11	26.33	224.05	220.38	12.31	274.84	0.98	309.12	1.01	0.62	29.77		428.00	4.40

zGJCOCE01-112	zircon	590.63	47.25	20.29	21.35	2.00	25.22	1.05	55.69	1.56	0.67	34.65		2827.00	13.00
zGJCOCE01-118	zircon	102.19	8.18	236.52	40.73	9.71	245.95	0.17	90.83	1.39	0.67	33.09		1203.00	22.00
z13GJCO01-2	zircon	172.84	13.83	168.20	50.38	1.35	179.80	0.30	119.92	2.20	0.71	38.77		1161.10	8.40
z13GJCO01-4	zircon	371.26	29.70	139.46	108.46	2.77	164.45	0.78	231.88	2.05	0.69	36.79		1508.60	6.30
z13GJCO01-9	zircon	385.29	30.82	94.25	59.28	1.19	107.90	0.63	169.94	3.41	0.74	44.45		2569.20	7.00
z13GJCO01-15	zircon	194.84	15.59	106.76	61.25	0.73	120.86	0.57	92.39	2.60	0.72	40.92		1541.00	9.60
z13GJCO01-19	zircon	97.97	7.84	57.21	30.66	0.48	64.27	0.54	26.12	4.55	0.76	49.55		1041.10	8.00
z13GJCO01-20	zircon	89.26	7.14	386.49	194.00	1.61	431.16	0.50	130.85	1.17	0.63	29.75		514.00	4.70
z13GJCO01-22	zircon	427.65	34.21	106.57	57.88	2.52	119.91	0.54	204.27	2.58	0.72	40.78		1065.50	9.40
z13GJCO01-27	zircon	472.70	37.82	45.19	41.43	0.64	54.73	0.92	109.16	4.61	0.76	48.58		1662.80	9.70
z13GJCO01-28	zircon	1370.52	109.64	120.40	67.05	1.23	135.84	0.56	807.73	2.64	0.72	40.81		2775.30	5.00
z13GJCO01-31	zircon	76.46	6.12	136.25	49.84	0.29	147.72	0.37	44.00	2.76	0.72	40.66		80.10	1.20
z13GJCO01-38	zircon	324.13	25.93	264.58	94.36	3.52	286.32	0.36	364.22	2.61	0.71	39.58		1788.20	5.50
z13GJCO01-43	zircon	176.33	14.11	92.65	36.24	4.62	101.01	0.39	71.92	3.34	0.74	44.30		1644.00	26.00
z13GJCO01-51	zircon	308.20	24.66	30.81	29.83	1.00	37.68	0.97	45.95	2.96	0.72	41.52		587.20	7.60
z13GJCO01-54	zircon	75.73	6.06	190.86	252.95	0.58	249.09	1.33	70.98	2.31	0.69	37.97		77.90	1.00
z13GJCO01-65	zircon	280.45	22.44	260.76	164.65	1.62	298.67	0.63	330.71	2.68	0.72	41.08		563.50	7.50
z13GJCO01-87	zircon	116.07	9.29	32.67	16.40	0.35	36.45	0.50	17.25	3.98	0.75	46.53		1927.00	13.00
z13GJCO01-98	zircon	132.74	10.62	82.71	91.57	1.32	103.80	1.11	55.96	4.27	0.74	46.45		454.20	4.90
z13GJCO01-103	zircon	463.71	37.10	134.79	43.35	1.16	144.77	0.32	257.19	2.19	0.69	36.22		1066.90	7.90
z13GJCO01-106	zircon	360.03	28.80	56.53	42.72	1.31	66.37	0.76	97.19	3.87	0.73	44.22		663.10	8.40

Table 3b: Near Rangely and Meeker, CO

Reduced (U-Th[Sm])/He Data															
Sample	**mineral**	**Age, Ma**	**err., Ma**	**U (ppm)**	**Th (ppm)**	**147Sm (ppm)**	**[U]e**	**Th/U**	**He (nmol/g)**	**mass (ug)**	**Ft**	**ESR**		**Best age**	**error**
z13NESLEN-1	zircon	315.71	25.26	146.63	66.66	2.73	161.99	0.45	214.60	5.66	0.76	48.72		2056.70	9.30
z13NESLEN-3	zircon	86.34	6.91	102.66	97.79	1.44	125.18	0.95	44.73	4.87	0.76	49.78		1721.00	11.00
z13NESLEN-4	zircon	286.52	22.92	289.45	141.23	1.58	321.97	0.49	366.62	3.01	0.72	41.55		1446.00	17.00
z13NESLEN-17	zircon	86.47	6.92	300.49	97.64	1.06	322.97	0.32	112.01	3.42	0.74	44.11		1722.00	11.00
z13NESLEN-25	zircon	92.18	7.37	357.61	200.44	1.82	403.77	0.56	139.29	2.15	0.69	36.76		1478.00	18.00

z13NESLEN-28	zircon	343.10	27.45	139.62	76.68	1.47	157.28	0.55	212.86	2.47	0.71	40.37		382.10	4.20
z13NESLEN-29	zircon	403.55	32.28	112.75	49.89	0.44	124.24	0.44	211.30	4.42	0.76	48.32		1631.00	23.00
z13NESLEN-32	zircon	408.25	32.66	404.43	261.21	2.76	464.57	0.65	754.60	2.64	0.72	40.99		410.40	3.40
z13NESLEN-36	zircon	429.36	34.35	132.05	85.75	1.92	151.80	0.65	270.91	3.93	0.75	46.36		419.70	3.10
z13NESLEN-38	zircon	90.15	7.21	549.70	157.61	2.88	585.99	0.29	213.00	3.40	0.74	44.72		1701.60	9.60
z13NESLEN-40	zircon	84.12	6.73	285.68	174.58	1.42	325.88	0.61	115.08	5.33	0.77	52.00		2005.00	11.00
z13NESLEN-43	zircon	421.92	33.75	151.11	62.16	0.76	165.42	0.41	286.18	3.31	0.74	44.05		1038.00	12.00
z13NESLEN-46	zircon	101.04	8.08	229.08	156.24	3.21	265.06	0.68	106.10	3.06	0.73	42.95		2446.50	9.10
z13NESLEN-47	zircon	79.02	6.32	221.54	69.24	1.06	237.49	0.31	79.48	6.37	0.78	53.23		1796.90	9.70
z13NESLEN-51	zircon	253.43	20.27	134.98	51.04	0.74	146.73	0.38	157.94	5.33	0.77	51.46		1075.70	9.20
z13NESLEN-69	zircon	412.73	33.02	133.64	65.23	1.70	148.66	0.49	243.11	2.80	0.71	40.21		1043.00	12.00
z13NESLEN-100	zircon	120.44	9.64	131.51	80.30	2.29	150.01	0.61	76.71	5.77	0.78	53.70		1716.00	12.00
z13NESLEN-102	zircon	294.89	23.59	141.23	117.12	1.08	168.19	0.83	203.04	4.41	0.74	45.82		471.70	4.50
z13NESLEN-119	zircon	332.96	26.64	129.50	215.41	3.24	179.10	1.66	230.90	2.59	0.70	39.52		618.70	6.60
zS2SEGO-3	zircon	141.46	11.32	49.98	37.45	0.84	58.61	0.75	32.77	3.04	0.72	42.42		1064.50	9.30
zS2SEGO-7	zircon	242.48	19.40	175.60	91.87	0.96	196.75	0.52	186.06	2.52	0.71	39.83		278.00	3.40
zS2SEGO-9	zircon	80.65	6.45	73.15	66.89	0.65	88.55	0.91	26.61	1.96	0.69	36.80		81.70	1.80
zS2SEGO-18	zircon	314.36	25.15	44.37	31.46	0.89	51.61	0.71	62.13	2.06	0.69	37.78		560.40	5.70
zS2SEGO-21	zircon	285.28	22.82	207.69	45.63	1.59	218.21	0.22	236.84	2.06	0.69	36.47		421.80	3.60
zS2SEGO-22	zircon	355.18	28.41	111.53	41.43	0.54	121.07	0.37	163.08	1.84	0.69	36.12		1054.00	7.20
zS2SEGO-30	zircon	304.60	24.37	57.90	22.42	0.28	63.07	0.39	75.77	2.50	0.72	40.34		3017.00	14.00
zS2SEGO-36	zircon	309.60	24.77	51.99	31.49	4.03	59.26	0.61	69.39	2.05	0.69	36.53		1021.00	11.00
zS2SEGO-40	zircon	290.87	23.27	98.83	41.84	1.43	108.47	0.42	120.97	2.27	0.70	37.61		1083.00	17.00
zS2SEGO-43	zircon	465.10	37.21	153.66	81.76	1.73	172.50	0.53	333.81	3.95	0.75	45.88		1097.60	7.00
zS2SEGO-45	zircon	97.95	7.84	216.24	73.16	1.21	233.08	0.34	94.40	4.56	0.76	48.64		1704.00	13.00
zS2SEGO-46	zircon	210.91	16.87	334.70	198.77	6.55	380.49	0.59	320.39	3.17	0.73	42.90		261.90	2.20
zS2SEGO-60	zircon	178.75	14.30	123.23	70.62	1.02	139.49	0.57	89.48	1.39	0.66	32.98		1730.00	14.00
zS2SEGO-68	zircon	562.13	44.97	315.46	12.12	1.00	318.26	0.04	743.27	2.97	0.74	42.97		2016.00	10.00
zS2SEGO-80	zircon	99.91	7.99	133.06	66.49	0.79	148.37	0.50	55.89	2.16	0.69	37.31		107.20	1.40
zS2SEGO-83	zircon	159.15	12.73	188.10	67.91	2.78	203.75	0.36	124.21	2.35	0.70	38.25		1749.00	22.00
zS2SEGO-86	zircon	468.76	37.50	66.74	22.96	0.51	72.03	0.34	135.23	2.51	0.72	40.60		2105.00	20.00
zS2SEGO-87	zircon	554.97	44.40	74.13	27.93	0.47	80.56	0.38	184.13	3.02	0.73	43.20		2843.00	10.00
zS2SEGO-119	zircon	116.81	9.34	107.00	60.54	0.85	120.94	0.57	58.60	4.65	0.76	49.36		103.10	1.80

z13LOYD-1	zircon	147.72	11.82	196.19	82.51	0.77	215.19	0.42	123.37	2.47	0.71	39.81		104.40	1.30
z13LOYD-2	zircon	165.38	13.23	209.50	43.51	3.63	219.53	0.21	145.73	3.14	0.74	43.18		397.60	9.40
z13LOYD-7	zircon	105.75	8.46	149.24	34.36	1.00	157.16	0.23	61.95	1.90	0.69	35.74		1025.00	17.00
z13LOYD-18	zircon	285.18	22.81	137.40	72.91	0.57	154.18	0.53	178.54	3.35	0.74	44.34		635.50	5.10
z13LOYD-22	zircon	235.80	18.86	87.72	55.68	0.61	100.54	0.63	88.21	1.77	0.68	35.58		1063.10	8.50
z13LOYD-23	zircon	181.58	14.53	283.65	100.77	2.21	306.86	0.36	209.25	1.83	0.69	36.23		454.60	7.00
z13LOYD-34	zircon	126.54	10.12	33.08	32.55	0.68	40.57	0.98	19.24	1.98	0.69	37.12		1043.00	14.00
z13LOYD-37	zircon	177.65	14.21	53.31	14.25	0.23	56.59	0.27	38.73	2.33	0.71	38.50		2700.10	7.40
z13LOYD-44	zircon	479.23	38.34	84.09	22.83	0.39	89.35	0.27	166.28	2.06	0.70	37.21		1037.60	8.90
z13LOYD-52	zircon	87.73	7.02	689.69	330.42	1.20	765.76	0.48	263.29	2.92	0.72	41.47		101.00	1.10
z13LOYD-60	zircon	307.49	24.60	21.75	19.32	1.12	26.20	0.89	30.48	1.94	0.69	36.90		1034.00	25.00
z13LOYD-62	zircon	293.86	23.51	178.91	77.95	1.33	196.86	0.44	215.43	1.63	0.68	35.05		1569.90	8.00
z13LOYD-64	zircon	96.54	7.72	423.84	75.08	1.14	441.13	0.18	170.18	3.08	0.74	43.14		1510.10	7.40
z13LOYD-78	zircon	123.74	9.90	173.89	88.08	0.86	194.17	0.51	89.81	1.87	0.69	36.41		1726.30	8.20
z13LOYD-81	zircon	246.00	19.68	146.59	72.76	1.97	163.35	0.50	152.90	2.19	0.69	37.30		1849.00	11.00
z13LOYD-82	zircon	291.72	23.34	60.81	59.32	0.49	74.47	0.98	80.24	1.64	0.67	35.07		2723.00	18.00
z13LOYD-84	zircon	217.46	17.40	141.38	54.88	1.06	154.02	0.39	125.13	1.79	0.68	35.64		425.20	4.70
z13LOYD-86	zircon	262.09	20.97	37.20	30.30	0.43	44.17	0.81	43.75	1.89	0.69	37.01		1997.10	8.40
z13LOYD-102	zircon	188.67	15.09	424.88	104.28	1.11	448.89	0.25	311.26	1.71	0.67	34.15		1946.00	7.30
z13LOYD-124	zircon	318.26	25.46	41.85	17.33	0.38	45.84	0.41	56.98	2.85	0.71	39.23		608.90	5.90
z13LOYD-125	zircon	290.27	23.22	31.87	16.59	17.31	35.77	0.52	40.28	2.32	0.70	38.78		1670.00	15.00
z13MARAPOS1-01	zircon	360.65	28.85	100.09	52.06	9.09	112.12	0.52	175.67	6.81	0.78	54.60		1706.00	10.00
z13MARAPOS1-03	zircon	72.25	5.78	258.36	133.26	2.04	289.05	0.52	86.27	4.85	0.76	49.10		161.30	2.00
z13MARAPOS1-05	zircon	595.07	47.61	56.72	47.86	6.49	67.77	0.84	165.89	3.56	0.73	43.61		1749.40	8.90
z13MARAPOS1-06	zircon	257.06	20.57	289.26	73.35	8.33	306.18	0.25	328.36	4.50	0.76	47.96		1110.00	11.00
z13MARAPOS1-14	zircon	196.63	15.73	165.32	120.45	5.31	193.07	0.73	152.19	3.73	0.73	43.73		247.60	2.20
z13MARAPOS1-18	zircon	239.20	19.14	202.26	52.72	4.88	214.42	0.26	205.85	2.93	0.73	42.63		1433.30	8.70
z13MARAPOS1-19	zircon	183.96	14.72	253.19	72.60	17.21	269.98	0.29	196.16	2.76	0.72	41.21		1730.40	7.30
z13MARAPOS1-23	zircon	65.71	5.26	102.18	38.86	6.67	111.16	0.38	30.02	4.63	0.76	48.03		1911.20	8.10

z13MARAPOS1-26	zircon	317.92	25.43	64.31	48.95	10.35	75.63	0.76	99.28	3.94	0.75	46.67		2614.00	24.00
z13MARAPOS1-27	zircon	285.50	22.84	117.14	24.36	5.29	122.77	0.21	139.58	2.91	0.72	41.12		950.00	15.00
z13MARAPOS1-33	zircon	444.93	35.59	165.84	53.71	0.95	178.21	0.32	335.92	4.64	0.76	48.31		1020.60	5.80
z13MARAPOS1-37	zircon	318.99	25.52	285.23	151.79	7.33	320.20	0.53	410.75	3.45	0.73	42.78		452.80	2.60
z13MARAPOS1-41	zircon	461.15	36.89	160.23	66.19	7.75	175.51	0.41	335.88	4.27	0.74	45.26		438.90	6.30
z13MARAPOS1-50	zircon	259.61	20.77	68.76	57.62	4.92	82.05	0.84	88.55	4.70	0.76	48.48		2067.10	7.50
z13MARAPOS1-54	zircon	74.93	5.99	999.86	271.91	15.86	1062.53	0.27	333.96	6.15	0.77	51.30		74.50	1.70
z13MARAPOS1-65	zircon	76.81	6.14	138.49	37.47	5.33	147.14	0.27	47.25	5.16	0.77	50.63		1714.30	6.60
z13MARAPOS1-69	zircon	348.99	27.92	102.74	59.69	8.66	116.52	0.58	168.81	4.20	0.75	46.89		2098.00	12.00
z13MARAPOS1-77	zircon	115.64	9.25	165.43	63.66	5.05	180.10	0.38	82.64	3.05	0.73	42.56		1708.00	11.00
z13MARAPOS1-83	zircon	70.22	5.62	104.45	44.02	5.98	114.61	0.42	32.54	4.05	0.75	45.57		77.00	1.50
z13MARAPOS1-100	zircon	326.93	26.15	141.27	73.04	7.58	158.12	0.52	211.32	3.49	0.74	44.80		415.90	3.80
z13MARAPOS1-113	zircon	68.82	5.51	112.11	109.73	6.06	137.40	0.98	38.23	4.18	0.74	46.25		63.90	1.40
z13MARAPOS1-116	zircon	137.48	11.00	190.16	53.83	12.35	202.62	0.28	113.20	3.75	0.75	45.34		1597.30	6.80
z13MEEI-1	zircon	91.56	7.32	829.14	498.26	7.26	943.88	0.60	322.86	2.02	0.69	36.66		1209.00	13.00
z13MEEI-2	zircon	288.76	23.10	147.48	84.91	1.76	167.03	0.58	176.61	1.52	0.67	33.97		656.40	5.60
z13MEEI-4	zircon	96.46	7.72	152.53	57.87	2.00	165.86	0.38	57.63	1.41	0.66	33.32		1246.00	14.00
z13MEEI-6	zircon	96.78	7.74	328.11	189.79	0.64	371.80	0.58	145.50	4.38	0.74	45.62		87.50	1.30
z13MEEI-21	zircon	344.46	27.56	55.38	30.46	0.46	62.40	0.55	85.88	2.78	0.72	41.83		637.70	6.30
z13MEEI-22	zircon	344.30	27.54	122.87	41.97	1.61	132.54	0.34	169.91	1.66	0.68	34.58		410.70	5.00
z13MEEI-25	zircon	274.62	21.97	230.18	112.20	3.44	256.02	0.49	267.29	2.02	0.69	37.03		1039.70	8.20
z13MEEI-28	zircon	167.82	13.43	133.51	99.71	0.44	156.46	0.75	95.46	1.59	0.67	34.19		181.80	2.30
z13MEEI-36	zircon	121.23	9.70	89.97	66.98	0.79	105.39	0.74	47.29	1.78	0.68	35.86		2727.00	12.00
z13MEEI-44	zircon	90.37	7.23	573.76	218.99	0.75	624.17	0.38	203.66	1.49	0.67	33.52		93.50	0.89
z13MEEI-47	zircon	331.82	26.55	337.11	127.16	5.21	366.41	0.38	491.59	3.03	0.73	43.02		1052.00	12.00
z13MEEI-50	zircon	303.56	24.29	191.63	62.24	1.33	205.96	0.32	245.46	2.45	0.71	39.70		1392.80	5.30
z13MEEI-86	zircon	308.80	24.70	117.97	51.60	1.36	129.86	0.44	157.83	2.91	0.71	40.18		1837.40	6.60
z13MEEI-90	zircon	83.21	6.66	136.99	59.74	77.54	151.13	0.44	51.06	3.78	0.75	45.87		1831.10	6.10
z13MEEI-101	zircon	67.14	5.37	97.45	33.56	1.10	105.18	0.34	27.14	2.45	0.71	39.17		1751.90	7.30
z13MEEI-103	zircon	203.73	16.30	115.49	65.60	1.21	130.60	0.57	108.64	3.77	0.75	45.97		1671.00	12.00
z13MEEI-116	zircon	84.73	6.78	53.60	23.24	0.66	58.95	0.43	19.15	2.44	0.71	38.94		2092.00	11.00

Table 3c: Zircon U-Pb Ages And Isotopic Data: Chapter 3

Table 3c: Near San Rafael Swell

Reduced (U-Th[Sm])/He Data															
Sample	**mineral**	**Age, Ma**	**err., Ma**	**U (ppm)**	**Th (ppm)**	**147Sm (ppm)**	**[U]e**	**Th/U**	**He (nmol/g)**	**mass (ug)**	**Ft**	**ESR**		**Final age 206_238**	**error**
z13DQDL-1	zircon	234.39	18.75	26.40	23.07	0.44	31.72	0.87	31.22	5.10	0.76	50.52		576.70	5.00
z13DQDL-2	zircon	133.69	10.70	48.46	27.10	0.77	54.70	0.56	29.46	3.49	0.74	44.73		156.20	2.30
z13DQDL-4	zircon	112.03	8.96	218.28	159.42	2.54	254.99	0.73	109.89	2.67	0.71	39.55		123.30	1.40
z13DQDL-5	zircon	334.01	26.72	44.95	31.54	1.20	52.21	0.70	67.61	2.70	0.70	38.85		1051.00	17.00
z13DQDL-10	zircon	286.73	22.94	44.01	24.02	1.26	49.54	0.55	56.66	3.14	0.72	42.08		1107.00	17.00
z13DQDL-15	zircon	376.55	30.12	72.90	35.56	0.71	81.09	0.49	124.72	3.58	0.74	44.17		2096.10	8.80
z13DQDL-17	zircon	150.10	12.01	152.10	117.20	0.72	179.09	0.77	110.85	4.72	0.75	48.31		119.70	1.50
z13DQDL-32	zircon	143.42	11.47	87.80	35.81	0.44	96.05	0.41	55.00	3.20	0.73	43.19		1589.00	17.00
z13DQDL-34	zircon	231.25	18.50	182.21	45.97	1.34	192.80	0.25	173.00	2.20	0.71	38.82		1589.00	17.00
z13DQDL-46	zircon	206.94	16.56	171.24	121.38	0.93	199.19	0.71	166.93	4.24	0.74	44.98		1190.00	11.00
z13DQDL-50	zircon	263.11	21.05	382.72	128.25	1.12	412.25	0.34	445.93	3.77	0.75	45.87		1921.80	5.50
z13DQDL-56	zircon	343.99	27.52	146.11	42.21	0.95	155.83	0.29	217.64	3.72	0.73	43.21		1220.00	12.00
z13DQDL-77	zircon	359.14	28.73	215.16	92.42	0.81	236.44	0.43	320.66	2.09	0.68	35.84		1007.00	11.00
z13DQDL-86	zircon	296.42	23.71	133.71	87.74	0.95	153.92	0.66	184.90	3.42	0.74	44.18		290.20	2.60
z13DQDL-89	zircon	184.98	14.80	152.65	112.21	0.97	178.48	0.74	142.90	9.65	0.79	57.06		464.40	4.90
z13DQDL-91	zircon	233.42	18.67	85.01	59.43	0.69	98.69	0.70	102.23	10.51	0.81	62.36		227.70	3.00
z13DQDL-106	zircon	409.06	32.72	99.05	48.71	0.85	110.27	0.49	183.92	3.34	0.73	43.64		2759.00	15.00
z13DQDL-112	zircon	291.70	23.34	52.17	45.77	0.81	62.71	0.88	74.95	3.85	0.74	46.03		1739.00	12.00
z13DQDL-113	zircon	496.13	39.69	60.85	17.18	0.75	64.81	0.28	141.77	6.57	0.79	54.68		1814.10	7.10
z13DQDL-118	zircon	388.27	31.06	31.54	233.19	41.52	85.43	7.39	144.46	8.01	0.78	56.89		2712.40	9.90
z13DQDL-121	zircon	237.01	18.96	126.21	158.95	1.57	162.81	1.26	145.95	2.52	0.69	37.58		618.10	6.20
zCedar-01	zircon	112.65	9.01	24.11	38.75	0.81	33.03	1.61	15.79	7.11	0.78	54.48		157.20	9.90
zCedar-02	zircon	292.11	23.37	86.43	52.35	0.29	98.49	0.61	120.26	4.65	0.76	48.69		1070.00	10.00
zCedar-04	zircon	404.16	32.33	61.21	31.85	1.43	68.55	0.52	112.10	3.07	0.73	42.76		1184.00	17.00
zCedar-09	zircon	333.67	26.69	333.43	36.49	3.71	341.85	0.11	474.97	3.77	0.75	46.23		1066.00	11.00
zCedar-11	zircon	147.63	11.81	93.58	32.63	0.78	101.10	0.35	56.74	2.12	0.70	37.56		1893.00	26.00

zCedar-13	zircon	351.62	28.13	59.50	52.37	0.60	71.56	0.88	97.22	2.30	0.70	38.62		574.00	10.00
zCedar-16	zircon	200.55	16.04	239.62	172.44	1.23	279.32	0.72	230.82	4.45	0.75	47.58		291.00	4.90
zCedar-19	zircon	178.49	14.28	150.28	68.51	1.12	166.06	0.46	116.32	2.92	0.72	40.88		1040.00	13.00
zCedar-20	zircon	172.76	13.82	188.13	117.18	0.94	215.11	0.62	136.92	1.74	0.67	35.08		1574.00	19.00
zCedar-21	zircon	365.48	29.24	112.34	33.33	0.73	120.02	0.30	177.65	2.99	0.73	42.71		1635.00	23.00
zCedar-22	zircon	195.40	15.63	140.04	75.35	0.50	157.39	0.54	127.36	4.91	0.76	48.17		1453.00	30.00
zCedar-25	zircon	121.63	9.73	451.86	173.09	1.69	491.71	0.38	223.83	2.11	0.69	36.33		131.20	3.00
zCedar-30	zircon	244.27	19.54	198.78	46.50	0.86	209.49	0.23	200.70	2.53	0.72	39.81		379.70	4.60
zCedar-34	zircon	248.02	19.84	297.20	74.15	0.65	314.27	0.25	314.42	3.78	0.74	43.17		584.60	6.50
zCedar-36	zircon	371.58	29.73	198.50	95.30	1.39	220.45	0.48	318.25	2.36	0.70	38.46		1675.00	21.00
zCedar-38	zircon	205.30	16.42	155.02	107.11	1.31	179.69	0.69	146.87	3.35	0.73	42.75		304.90	6.30
zCedar-40	zircon	321.73	25.74	210.17	72.03	1.05	226.76	0.34	291.10	2.88	0.72	41.42		1684.00	27.00
zCedar-42	zircon	131.42	10.51	232.33	128.48	0.84	261.91	0.55	143.39	5.22	0.76	49.93		155.10	2.70
zCedar-44	zircon	202.23	16.18	259.89	43.28	1.97	269.86	0.17	206.31	2.37	0.69	36.25		476.00	11.00
zCedar-48	zircon	223.60	17.89	221.48	172.14	1.92	261.11	0.78	234.96	3.85	0.73	44.07		472.50	7.70
zCedar-50	zircon	231.68	18.53	264.90	216.65	1.49	314.78	0.82	304.43	5.72	0.76	49.47		228.70	3.20
zCedar-51	zircon	209.10	16.73	820.13	371.27	6.72	905.64	0.45	697.03	1.88	0.67	34.57		407.60	7.40
zCedar-55	zircon	259.58	20.77	282.77	75.00	2.91	300.05	0.27	316.37	3.68	0.74	44.03		1077.00	15.00
zCedar-58	zircon	433.74	34.70	157.25	76.03	0.91	174.76	0.48	309.29	3.32	0.73	43.47		1685.00	24.00
zCedar-69	zircon	361.81	28.94	109.22	51.66	0.98	121.12	0.47	186.43	5.31	0.77	50.50		451.10	8.10
zCedar-70	zircon	133.41	10.67	219.37	97.33	0.43	241.78	0.44	118.57	1.91	0.68	34.83		126.80	2.40
zCedar-73	zircon	458.41	36.67	126.93	42.87	0.74	136.81	0.34	263.94	4.81	0.75	47.14		1056.00	16.00
zCedar-75	zircon	366.99	29.36	166.55	71.52	0.61	183.02	0.43	267.20	2.70	0.72	40.90		1014.40	9.70
zBuckhorn-06	zircon	279.92	22.39	293.38	65.32	2.25	308.43	0.22	386.07	9.50	0.81	62.23		335.50	6.20
zBuckhorn-08	zircon	433.80	34.70	98.83	43.02	0.58	108.74	0.44	211.23	9.60	0.80	59.98		1780.00	24.00
zBuckhorn-15	zircon	225.44	18.04	274.01	110.65	1.32	299.48	0.40	293.35	7.20	0.79	56.64		514.00	18.00
zBuckhorn-18	zircon	274.58	21.97	247.49	264.02	2.26	308.28	1.07	375.06	10.21	0.80	61.63		412.60	6.90
zBuckhorn-21	zircon	1020.16	81.61	27.43	14.50	0.87	30.77	0.53	148.68	10.58	0.80	60.09		2067.00	38.00
zBuckhorn-25	zircon	292.20	23.38	115.23	79.30	1.62	133.49	0.69	161.91	4.50	0.75	47.70		424.90	9.70
zBuckhorn-39	zircon	184.38	14.75	161.50	66.61	0.57	176.84	0.41	148.93	15.80	0.83	72.30		210.50	4.40
zBuckhorn-40	zircon	324.21	25.94	131.54	35.80	0.76	139.79	0.27	196.62	6.61	0.78	54.25		1097.00	13.00
zBuckhorn-47	zircon	245.17	19.61	61.39	32.67	0.52	68.91	0.53	79.00	21.10	0.85	80.39		1438.00	38.00

zBuckhorn-50	zircon	232.23	18.58	339.13	105.11	5.48	363.35	0.31	357.95	7.53	0.77	51.35		1614.00	17.00
zBuckhorn-56	zircon	864.53	69.16	82.10	24.34	0.44	87.71	0.30	356.53	8.85	0.81	61.25		992.00	12.00
zBuckhorn-59	zircon	275.78	22.06	291.60	148.01	0.49	325.67	0.51	371.69	3.95	0.75	47.11		1167.00	19.00
zBuckhorn-67	zircon	159.25	12.74	133.30	23.18	0.64	138.64	0.17	84.72	2.17	0.70	37.98		1013.00	17.00
zBuckhorn-73	zircon	447.58	35.81	81.92	40.52	0.46	91.25	0.49	187.52	11.43	0.82	66.86		1836.00	20.00
zBuckhorn-78	zircon	617.85	49.43	241.30	46.82	4.59	252.10	0.19	671.28	4.35	0.76	48.20		588.40	7.60
zBuckhorn-82	zircon	273.30	21.86	119.61	85.20	0.87	139.23	0.71	151.33	2.90	0.72	42.10		2840.00	14.00
zBuckhorn-83	zircon	414.91	33.19	276.89	124.43	1.69	305.55	0.45	553.60	6.96	0.78	54.64		1839.00	18.00
zBuckhorn-89	zircon	426.18	34.09	43.39	25.31	0.96	49.22	0.58	87.19	4.36	0.75	46.25		1035.00	16.00
zBuckhorn-90	zircon	288.56	23.08	747.78	160.99	3.77	784.86	0.22	1057.81	18.17	0.85	77.12		963.00	11.00
zBuckhorn-91	zircon	139.97	11.20	756.42	473.36	2.17	865.39	0.63	518.27	6.99	0.78	55.07		159.80	2.50
zBuckhorn-93	zircon	1291.35	103.31	52.34	45.00	1.22	62.71	0.86	376.24	5.28	0.77	51.79		1451.00	34.00
zBuckhorn-98	zircon	1449.32	115.95	48.02	60.52	0.88	61.96	1.26	471.63	22.07	0.84	78.91		2737.00	22.00
zBuckhorn-103	zircon	233.88	18.71	140.14	81.51	0.45	158.91	0.58	162.90	8.03	0.80	58.94		225.40	4.90
zBuckhorn-105	zircon	886.89	70.95	190.85	78.08	1.56	208.83	0.41	863.89	8.64	0.80	59.36		1496.00	27.00
zBuckhorn-110	zircon	286.16	22.89	248.20	68.96	0.38	264.07	0.28	315.99	4.44	0.76	48.06		1039.00	13.00
zBuckhorn-113	zircon	1034.80	82.78	72.05	46.68	0.84	82.80	0.65	409.26	9.37	0.81	62.41		1777.00	21.00
zBuckhorn-117	zircon	146.24	11.70	174.27	94.32	0.82	195.99	0.54	131.29	20.19	0.84	74.85		2705.00	13.00
zBuckhorn-120	zircon	494.49	39.56	207.07	54.48	0.67	219.62	0.26	498.07	10.41	0.82	64.32		1108.00	11.00
zBuckhorn-121	zircon	468.83	37.51	186.53	71.03	2.14	202.90	0.38	438.92	13.06	0.82	67.41		1899.00	20.00
z13DQM-1	zircon	222.76	17.82	223.32	91.92	0.92	244.49	0.41	229.37	6.27	0.77	50.43		437.10	4.30
z13DQM-2	zircon	257.11	20.57	180.94	108.34	3.04	205.89	0.60	220.33	4.71	0.76	48.38		331.30	2.30
z13DQM-3	zircon	664.21	53.14	27.52	18.14	0.83	31.70	0.66	87.24	3.32	0.73	43.54		1091.00	10.00
z13DQM-6	zircon	386.35	30.91	167.96	132.99	1.88	198.58	0.79	320.41	4.25	0.75	47.77		409.80	3.80
z13DQM-13	zircon	402.41	32.19	39.38	14.92	0.50	42.82	0.38	72.31	4.41	0.76	47.48		1094.00	13.00
z13DQM-20	zircon	286.96	22.96	263.99	73.46	1.85	280.91	0.28	324.12	3.27	0.73	42.48		1083.20	8.80
z13DQM-23	zircon	284.33	22.75	76.36	79.93	1.59	94.77	1.05	110.19	3.79	0.74	45.99		1050.10	8.80
z13DQM-25	zircon	259.60	20.77	331.38	163.79	2.20	369.09	0.49	404.23	6.64	0.77	50.44		469.70	5.10
z13DQM-30	zircon	463.92	37.11	77.20	27.44	0.75	83.52	0.36	154.39	2.57	0.72	40.11		2655.00	31.00
z13DQM-32	zircon	162.02	12.96	57.63	108.44	3.46	82.61	1.88	54.08	5.10	0.74	45.78		157.30	4.70
z13DQM-34	zircon	245.10	19.61	221.09	78.84	0.45	239.24	0.36	257.95	9.22	0.80	59.10		237.10	2.10
z13DQM-36	zircon	258.59	20.69	81.11	72.02	0.86	97.69	0.89	103.08	4.15	0.74	45.77		629.00	5.40

z13DQM-40	zircon	205.94	16.48	401.56	185.52	1.69	444.27	0.46	381.76	4.72	0.76	49.13		1574.00	11.00
z13DQM-44	zircon	200.62	16.05	184.37	46.09	0.99	194.98	0.25	162.87	5.30	0.76	48.32		1666.00	15.00
z13DQM-52	zircon	314.43	25.15	138.90	39.49	1.62	148.00	0.28	187.54	3.23	0.73	42.54		1526.50	8.10
z13DQM-61	zircon	361.63	28.93	141.73	82.31	0.77	160.68	0.58	242.06	4.28	0.75	47.30		370.30	3.90
z13DQM-73	zircon	241.34	19.31	76.65	44.99	0.74	87.01	0.59	91.17	7.80	0.79	56.60		1513.00	15.00
z13DQM-81	zircon	156.55	12.52	42.45	59.60	1.11	56.18	1.40	35.63	4.71	0.74	46.04		156.20	3.00
z13DQM-86	zircon	325.22	26.02	84.27	76.68	2.71	101.94	0.91	131.57	3.25	0.72	41.68		508.90	5.80
z13DQM-106	zircon	141.38	11.31	335.26	333.64	2.61	412.08	1.00	246.48	8.14	0.77	53.16		160.60	1.40

Table 3d: Zircon (U-Th)/He Ages And Isotopic Data: Chapter 5

Table 3d: Los Molles and Las Lajas Formations

ZIRCON (U-Th[Sm])/He Data														
Sample	**mineral**	**Age, Ma**	**err., Ma**	**U (ppm)**	**Th (ppm)**	**147Sm (ppm)**	**[U]e**	**Th/U**	**He (nmol/g)**	**mass (ug)**	**Ft**	**ESR**	**Best age**	**error**
zVR5A-18	zircon	182.9	14.63	138.2	45.3	0.9	148.7	0.33	111.2	4.07	0.75	45.97	272.1	3.6
zVR5A-23	zircon	215.3	17.22	828.4	176.4	4.9	869.1	0.21	801.5	6.22	0.78	53.17	444.6	4.5
zVR5A-25	zircon	206.8	16.54	390.5	284.3	3.4	456.0	0.73	365.2	2.47	0.71	39.62	378	4.8
zVR5A-42	zircon	204.9	16.39	152.1	105.4	2.2	176.3	0.69	158.8	8.68	0.80	60.30	1030	11
zVR5A-49	zircon	150.3	12.03	75.2	85.1	0.8	94.8	1.13	65.7	20.94	0.84	78.00	154.5	3.9
zVR5A-58	zircon	172.5	13.80	421.7	393.6	7.1	512.3	0.93	379.3	6.38	0.78	55.55	158.5	3.7
zVR5A-77	zircon	153.2	12.26	757.4	310.2	17.7	828.9	0.41	548.7	7.94	0.79	56.62	354.2	4
zVR5A-107	zircon	286.1	22.89	148.5	99.1	0.9	171.3	0.67	210.8	7.48	0.78	54.01	275.4	3.4
zVR5A-111	zircon	188.3	15.07	356.7	181.1	3.9	398.4	0.51	294.1	2.95	0.72	40.76	191.7	2.7
zVR5A-116	zircon	274.7	21.97	103.8	128.3	2.0	133.4	1.24	161.1	8.80	0.80	59.89	308	3.7
zVR5A-119	zircon	245.1	19.61	156.2	80.1	1.0	174.6	0.51	183.5	6.75	0.78	53.76	254.7	3.4
zVR5A-124	zircon	196.8	15.75	273.2	107.1	1.4	297.9	0.39	228.9	2.74	0.71	40.03	261.3	3.7
zVR3A-2	zircon	215.5	17.24	237.8	184.2	2.4	280.3	0.77	262.4	8.37	0.79	57.41	344.6	5.1
zVR3A-16	zircon	166.7	13.34	343.5	231.2	1.6	396.7	0.67	289.8	10.13	0.80	60.30	297	3.6
zVR3A-32	zircon	236.6	18.93	155.4	76.5	1.0	173.0	0.49	187.4	17.87	0.83	71.92	319.9	7.5
zVR3A-39	zircon	145.6	11.65	118.5	114.6	1.2	144.9	0.97	94.5	12.22	0.82	67.23	289.8	4.8
zVR3A-71	zircon	251.5	20.12	200.4	100.4	1.2	223.5	0.50	237.0	6.46	0.77	50.47	267.3	5.1
zVR3A-76	zircon	183.0	14.64	150.6	106.5	3.6	175.1	0.71	134.1	4.78	0.76	50.29	1054	12
zVR3A-77	zircon	228.1	18.25	206.9	132.4	2.0	237.4	0.64	240.5	10.36	0.81	62.69	252.9	4
zVR3A-82	zircon	237.9	19.03	557.0	64.5	2.2	571.9	0.12	624.0	14.10	0.83	71.03	356	4.3
zVR3A-115	zircon	208.3	16.66	87.0	65.0	0.8	102.0	0.75	83.7	2.87	0.72	41.54	1761	19
zVR30-35	zircon	220.5	17.64	466.7	193.7	2.3	511.3	0.41	452.2	3.82	0.73	43.09	387.7	5.3

zVR30-41	zircon	262.3	20.98	128.8	116.0	2.1	155.6	0.90	152.4	1.93	0.68	36.10	1227	11
zVR30-52	zircon	161.7	12.93	385.3	128.0	1.2	414.8	0.33	250.3	1.94	0.68	35.77	273.6	4.2
zVR30-65	zircon	170.5	13.64	159.2	72.1	3.4	175.8	0.45	116.0	2.41	0.71	39.37	1021	15
zVR30-68	zircon	238.1	19.05	394.9	83.0	1.7	414.0	0.21	423.7	6.18	0.78	53.57	299.6	3.9
zVR30-95	zircon	217.6	17.40	266.7	98.9	1.8	289.5	0.37	254.8	3.40	0.74	44.19	272.3	3.6
zVR30-105	zircon	209.3	16.74	149.4	73.7	1.0	166.3	0.49	155.5	11.98	0.81	64.32	274.9	3.9
zVR30-108	zircon	228.8	18.31	421.7	78.4	1.0	439.8	0.19	438.6	7.47	0.79	56.63	412.7	3.2
zVR30-123	zircon	252.4	20.19	211.3	91.4	0.8	232.4	0.43	252.0	7.21	0.78	53.87	270.8	3
zVR08-24	zircon	153.8	12.31	291.3	247.7	2.3	348.3	0.85	172.6	0.87	0.59	27.14	267.1	3.9
zVR08-50	zircon	202.5	16.20	663.1	163.3	5.1	700.7	0.25	439.3	0.56	0.57	24.61	367	12
zVR08-53	zircon	146.0	11.68	91.7	110.2	1.0	117.1	1.20	58.4	1.15	0.63	30.47	230.2	3.5
zVR08-60	zircon	224.9	18.00	235.3	149.5	1.3	269.7	0.64	224.5	1.76	0.68	35.19	267.6	3.5
zVR08-76	zircon	191.6	15.33	200.0	203.4	0.7	246.8	1.02	171.5	1.61	0.66	34.15	258.7	2.8
zVR08-77	zircon	194.0	15.52	75.8	85.1	1.4	95.4	1.12	62.9	1.04	0.62	29.96	264.8	5.6
zVR08-78	zircon	178.2	14.26	329.3	232.6	2.3	382.8	0.71	259.5	2.62	0.70	37.96	276.6	3.8
zVR08-95	zircon	185.1	14.81	151.0	168.3	1.5	189.8	1.11	118.0	1.16	0.61	29.35	225.9	4.2
zVR08-96	zircon	220.8	17.66	118.9	103.5	1.7	142.7	0.87	107.0	1.19	0.62	29.69	307.3	5.5
zVR08-110	zircon	182.1	14.56	59.7	120.4	1.5	87.4	2.02	57.9	1.69	0.66	34.87	203.9	4.1
zVR08-113	zircon	260.2	20.82	22.9	40.2	0.7	32.1	1.76	28.7	1.16	0.62	30.67	249.5	4.3
zVR08-115	zircon	220.7	17.66	107.2	129.3	2.2	137.0	1.21	115.6	2.50	0.70	38.71	218.9	3.5
zVR08-123	zircon	192.6	15.41	211.1	209.1	3.0	259.2	0.99	179.7	1.73	0.66	33.56	265.5	3.5
zVR08-125	zircon	236.5	18.92	211.1	134.1	1.3	242.0	0.64	229.0	3.45	0.73	43.06	487	12
zMolles2-02	zircon	216.4	17.31	377.9	73.4	1.7	394.8	0.19	369.8	8.40	0.79	55.31	279.4	2.9
zMolles2-03	zircon	178.2	14.25	157.6	93.8	0.7	179.2	0.60	126.8	3.49	0.73	42.59	270.2	4.3
zMolles2-06	zircon	162.1	12.96	252.3	76.4	1.0	269.9	0.30	177.8	4.26	0.75	45.22	190.4	4.1
zMolles2-08	zircon	160.1	12.81	202.2	110.1	1.0	227.5	0.54	158.9	8.65	0.80	59.04	169.3	2.8
zMolles2-10	zircon	179.7	14.38	646.6	140.3	3.3	678.9	0.22	492.3	3.35	0.74	43.74	282.8	3.2
zMolles2-12	zircon	178.8	14.30	281.7	146.8	1.2	315.5	0.52	243.5	7.73	0.79	56.20	183.4	1.9

zMolles2-15	zircon	182.5	14.60	634.6	175.7	9.4	675.1	0.28	510.6	4.60	0.76	47.84	287.9	3.4
zMolles2-16	zircon	196.0	15.68	392.0	118.6	1.0	419.3	0.30	340.7	4.75	0.76	47.83	282.7	2.7
zMolles2-20	zircon	226.4	18.12	466.2	131.9	4.6	496.6	0.28	465.1	4.56	0.75	47.05	1014	28
zMolles2-21	zircon	200.2	16.02	600.7	65.0	1.1	615.7	0.11	511.8	5.34	0.76	47.40	286.7	3.8
zMolles2-23	zircon	191.5	15.32	300.8	79.6	1.6	319.2	0.26	224.9	1.68	0.67	34.29	280.8	3.8
zMolles2-44	zircon	217.6	17.41	269.4	102.7	0.7	293.1	0.38	263.1	4.88	0.75	47.02	268.8	3.7
zMolles2-47	zircon	210.7	16.86	539.5	54.4	1.3	552.0	0.10	479.9	4.69	0.75	46.24	279	3.1
zMolles2-48	zircon	198.6	15.89	258.2	71.0	1.6	274.5	0.27	228.6	5.89	0.77	49.59	449.5	7
zMolles2-50	zircon	211.1	16.89	132.2	47.2	0.6	143.0	0.36	128.2	5.56	0.77	51.89	273.5	3.1
zMolles2-55	zircon	192.1	15.37	99.6	41.3	2.7	109.1	0.41	82.8	2.78	0.72	41.46	277.8	6.7
zMolles2-58	zircon	156.9	12.55	29.4	35.4	0.9	37.5	1.21	22.8	2.77	0.71	40.36	234.8	6.9
zMolles2-60	zircon	151.7	12.14	207.6	94.8	0.9	229.5	0.46	129.4	1.97	0.68	35.68	185.8	2.1
zMolles2-72	zircon	155.2	12.41	154.8	61.1	1.8	168.8	0.39	103.4	3.12	0.72	41.62	267.3	3.3
zMolles2-77	zircon	229.5	18.36	413.3	83.7	1.6	432.5	0.20	406.1	4.53	0.75	45.16	276.5	2.9
zMolles2-80	zircon	199.4	15.95	228.1	171.9	2.2	267.7	0.75	230.6	8.16	0.79	56.50	167.2	2
zMolles2-91	zircon	200.0	16.00	150.7	63.9	0.4	165.4	0.42	137.7	5.71	0.76	48.66	184.1	3.3
zMolles2-95	zircon	221.6	17.73	368.8	82.9	1.4	387.9	0.22	304.9	1.46	0.65	31.39	271	10
zMolles2-98	zircon	167.0	13.36	244.1	63.5	0.8	258.7	0.26	158.2	1.67	0.67	34.01	258.6	3.1
zMolles2-124	zircon	228.3	18.26	213.8	54.8	0.5	226.4	0.26	204.1	2.84	0.72	40.80	281.1	4.1
zMolles2-127	zircon	204.4	16.35	199.3	60.1	0.9	213.1	0.30	171.4	3.02	0.72	40.68	277	3.3
zMolles2-129	zircon	195.2	15.62	153.0	58.1	0.9	166.3	0.38	127.1	2.92	0.72	40.37	480	17

Table 4: Apatite (U-Th)/He Ages And Isotopic Data: Chapter 5

Table 4: Los Molles and Las Lajas Formations

APATITE (U-Th[Sm])/He Data												
Sample	**mineral**	**Age, Ma**	**err., Ma**	**U (ppm)**	**Th (ppm)**	**147Sm (ppm)**	**[U]e**	**Th/U**	**He (nmol/g)**	**mass (ug)**	**Ft**	**ESR**
VR30-01	apatite	24.5	1.47	8.0	107.8	140.3	33.5	13.52	2.4	0.78	0.52	31.47
VR30-02	apatite	36.7	2.20	26.4	45.0	275.4	38.1	1.71	5.0	1.87	0.65	42.83
VR30-03	apatite	35.0	2.10	16.2	23.1	239.1	22.7	1.43	2.3	0.65	0.52	29.50
VR30-04	apatite	24.7	1.48	17.1	61.8	124.5	31.9	3.62	2.3	0.76	0.53	31.73
VR30-05	apatite	16.0	0.96	5.5	174.1	532.0	48.2	31.61	2.3	0.71	0.52	31.08
VR08-01	apatite	21.6	1.29	4.6	44.9	183.2	15.8	9.80	1.3	2.96	0.68	49.96
VR08-02	apatite	16.9	1.01	3.2	113.0	162.0	30.0	35.67	2.0	3.79	0.69	52.39
VR08-03	apatite	18.2	1.09	15.8	53.5	332.5	29.8	3.38	2.1	4.15	0.70	52.05
VR08-04	apatite	24.3	1.46	6.6	27.1	88.9	13.3	4.09	1.2	2.38	0.66	45.68
Molles2-01	apatite	78.9	4.73	19.9	20.5	131.0	25.3	1.03	6.5	1.02	0.59	35.83
Molles2-02	apatite	65.6	3.94	15.7	4.5	229.0	17.8	0.29	4.9	5.22	0.75	58.73
Molles2-03	apatite	73.5	4.41	47.9	21.4	221.2	53.9	0.45	13.8	1.37	0.63	39.31
Molles2-04	apatite	56.7	3.40	34.9	19.0	180.1	40.2	0.54	6.9	0.67	0.55	31.10

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